ACE

ADVANCED COMPUTER ENTERTAINMENT

Exclusive! We get our hands on the ultimate games console...

KONIX:

The hardware... the software...

...THE TRUTH

LEARN TO FLY

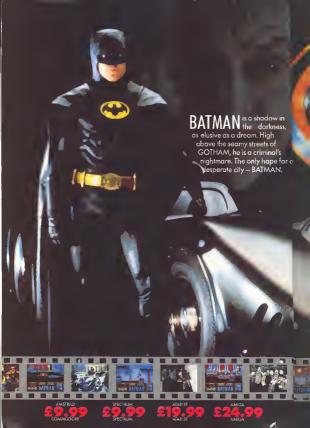– with £600 of free lessons from Activision. Check out page 38.

TAKE OFF

...in *F15 II*: the most technically advanced flight sim we've seen on a home micro.

CRASH!

...if you're lucky, otherwise mankind might as well resign. Find out why inside...

BATMAN is a shadow in the darkness, as elusive as a dream. High above the seamy streets of GOTHAM, he is a criminal's nightmare. The only hope for a desperate city — BATMAN.

25

A Konix beat the big boys? ACE checks out the prospects for Britain's console contender.

HERE AT...

...a year ter's ACE reported in the Flare machine a games that ould make your dream oms true with stunning sound aphics demoul
...the R95, nology Flare machine is back with a r as the core hardware design a Konix s new Multi-System m bine Flare's potent powerhouse with Konix's flair for impopeter design and you have it machine that could revolutionise sole games in this country or will it find out on pages 25/28

XEN
ten
up

TAKE TO THE S

Activision reckon they have a winner in their latest release,

RULE BRITANNIA!

You may not realise it, but the games we play in Britain are often determined by the buying whims of people in America and Japan. In the old days, the Commodore 64 rose to power on a wave of imported US software, and now Nintendo threatens to swamp the world games market with Japanese Gameboys. Then along comes Konix with a world-beating BRITISH hardware design. And what happens? Do we give them a big hand? Do we ever?! On the contrary, a selection of gloom-mongers in the business go around saying what a wonderful machine it is out of one side of their mouth, and how it's bound to fail out of the other. Don't knock it – this machine is GOOD. Just keep your fingers crossed and Britain could soon be taking the trophy in the console wars.

XENON II – latest contender in the 'shoot-em-up of the year' category...

EYE OF HORUS – play god game in Ancient Egypt...

SKIES! FREE!

Bomber. We reckon you've got a winning chance of flying off with this £600 prize on P38.

Eye of Horus

Atari ST Screen Shot *Atari ST Screen Shot* *Atari ST Screen Shot*

Walk Like An Egyptian.... Fly Like A Bird

You are Horus, the hawk-headed God that embodied all that is light and good to the Ancient Egyptians. Now, in the labyrinths of a burial chamber, you must relive the struggle that is the myth of Horus.

Eye of Horus synthesises adventure with frenetic arcade action- Adventure that is faithful to the Myth of Horus, as told in the Egyptian Book of the Dead –

- stunning Egyptian graphics
- 44-location adventure area
- over 30 collectables with unique properties
- self-mapping

Arcade power from state-of-the-art techniques-

- 5 types of firepower
- over 50 types of hieroglyphic attack wave
- arcade scoring and high-score table

Logotron, Chancery House, 107 St. Pauls Road, Islington, London. N1 2NA

ATARI UNWRAP STACY

According to sources close to Atari, several new ST-compatible machines are to be launched at the World's largest Atari show in Dusseldorf, Germany.

The machine most likely to appear is the long-awaited Stacy, a portable version of the ST.

Several setbacks have caused the machine's release date to be postponed the latest delay being due to the lengthy process of blowing TOS 1.4 (the new operating system) onto ROM.

Four versions of the luggable are planned. The basic model will come with an 8MHz 68000 processor (identically rated to the current ST processor), 256K ROM, 1 Mbyte of main memory, 32 of static RAM for the screen, Supertwist monochrome LCD screen (with optional backlighting), 3.5-inch double sided floppy drive, trackerball and two mouse buttons on the keyboard. The liquid crystal display will have a resolution of 640 by 400 - the same as the Atari SM124 monochrome screen.

Other models in the Stacy range will come with various configurations of drive and memory.

All standard ST ports are present on Stacy: monitor socket serial, MIDI, parallel, floppy, hard disk, RS232, cartridge.

The basic Stacy is expected to start around £1000.

Atari's 68030 workstation is also expected to be displayed at the show. The TT, standing for thirty-two thirty two, is claimed to support the Unix, ST TOS and MS-DOS operating systems. The TT is likely to come in a tower system and be priced around £2500

ST games players have long been waiting for Atari to produce a machine capable of giving the Amiga a run for its money. It seems Atari has taken note and is to launch an expanded ST at Dusseldorf. The notion of a super ST is nothing new, but it seems things are really happening with many major software houses in the country having received development machines. Atari is planning to quietly introduce the enhanced ST, or STE, in place of the existing 520 in the Powerpack bundle later this year.

Details on the new machine are sketchy, but sources have revealed the following:

-4096-colour palette with identical resolutions and on-screen colours to the existing ST

-Two-channel stereo 8-bit DMA sound chip as well as the existing ST Yamaha sound chip

-Extremely rapid multi-directional hardware scrolling.

In all other aspects the STE will be identical to the ST. A double sided floppy will be provided as standard and the processor will be the same 8MHz-rated 68000 (Atari that graces all current STs. Because the STE will contain the same hardware (along with a few extras) as the ST, all existing ST programs should run on it.

Next month's ACE will carry a full report of the new Atari machines shown at Dusseldorf!

BABY ARCHIE GETS GAMES

Acorn's cut-down Archimedes, the A3000, looks as though it's going to get the games support that its bigger brother missed out on. Representatives from 30 games software houses recently attended a conference organised at Acorn, where the bigwigs cut into a marketing strategy (more than the Archie ever had) and revealed details of the developers' package for the machine.

As far as Acorn and the A3000-buying public are concerned, the whole thing seems to have been a success; no less a luminary than Ocean's Gary Bracey said afterwards "It's a lovely machine and I'm sure we will be doing something for it. From what I have seen and learned today the A3000 deserves only our highest profile

titles such as *Batman* and *The Untouchables*.' Other software houses aired similarly enthusiastic opinions and one, Domark, already have two games under development – *Trivial Pursuits* and *Hard Drivin'*, due to be previewed at the PCW Show

WORLD'S LARGEST AMIGA?

It's not just the Yanks and the Japs who produce exotic equipment. Our Danish correspondent, Kenneth Bernholm, has turned up the WORLD'S LARGEST AMIGA ever in the land of the Viking. The Tower Amiga lets you build your own system in a fancy stand-on-its-side cabinet. All the switches are on the front of the box, making it nice and simple to reach and use. Inside, you've got your standard Amiga 2000 - but there's also room for all sorts of extras, like hard disks, PC emulator boards, genlock, extra RAM, MIDI equipment and heaven knows what else. And the cost? Not as bad as you might think. For around £500 Eurotrade of Arhus will stick your Amiga inside the box and set everything up. Eurotrade can be found at Finlandsgade 25, DK-8200 Arhus N, Denmark. Tel. 86165111

ELECTRONICA '89

New Agers and computer music and graphics freaks take note, the Electronica '89 show takes place on September 23rd in London's Logan Hall. A battery of synths and computers will be producing all sorts of far out music, while banks of Amigas and a Fairlight Computer Video Instrument are among the visual attractions. If you want tickets or further details, contact AMP Records on 01-885 5665 during office hours

SKYWARE!

Tediously boring plane flights could take on a whole new dimension next year if Plessey's new Integrated Flight and Entertainment Services System (IFESS) becomes reality. IFESS will allow you to play computer games, hire video and audio channels and access tele-banking and shopping services - all from the immaculate comfort of your plane seat. The system comprises a colour LCD display, headset and keyboard, linked to the aircraft's satellite system for global communications. IFESS was shown at this year's Paris Air Show, and has attracted interest from over 40 airlines. Of course, for the ultimate gaming experience you might like to hook your game of Falcon into the real aircraft's control mechanisms ...

IT'S MAGIC

The guys at Liverpool's Digital Magic Software are busy performing magic tricks. Jules Bert, DMS company boss, explained: "I've been doing magic tricks since the age of six and got John Law (another DMS person interested soon after I meet him".

When we asked what tricks DMS get up to, Jules replied, "Nothing too big like involving stage props, just sleight of hand close-up stuff with cards and coins in the pub". It certainly looks like we have the beginnings of a games industry circus, it there are any other acts out there please get in touch .

RENT BOYS TAKE ACTION

You can now rent Action Screenplay, the computer games video magazine, from your local video library. Screenplay's latest issue, number three, is a 90 minute feature length edition incorporating over 35 games, 2 interviews (one with top US games company Actwason, the other with music maestro Bomb the Bass), and a new section, Playback, which relives classic games of bygone days. If you prefer you can still buy the video from your local software dealer.

Hotshot MD Jon Beales

PIRACY KILLS...

Mnngo Amyatt-Ler managing director of bankrupt games software company Software Horizons, has placed the blame for his company's recent demise firmly on the shoulders of software pirates and their illegal practices.

Amyatt-Ler told ACE, "Obviously we were undercapitalised but PIRACY PUT US UNDER 'saw one of our ST games as an example. Dragonscape sold only 2000 copies worldwide, out of a potential market of over a million STs. That's a pretty poor showing." On the whole situation he commented, "I feel really pissed off, piracy has got a lot worse over the last few years and shows no signs of stopping".

Software Horizons was set up by the 23 old entrepreneur last year, and produced such games as the aforementioned Dragonscape (a multi-directional blaster) and Veteran (a Operation Wolf inspired shoot'em-up). More recently Horizons turned its attentions to more serious products with the Mastersound sound sampling hardware and software for the ST and news production soft ware, Sleepsafe on the PC.

The company leaves debts of over £370,000 with Amyatt-Ler personally losing "a substantial amount of money" He laments. It's a very messy business but I will be staying in the computer games industry"

Meanwhile news reaches us from Denmark, scene of previous ACE investigations into international piracy, that moves by the police are doing nothing to help the situation.

SNIPPETS

Leading software games company, US Gold has put the price of its £14.99 16-bit games back up to £19.95, because of a lack of response from the games buying public. Gold originally had plans to release Vigilante, the IREM beat'em-up, for £15, but has upped its price by £5.

Meanwhile, Prism Leisure is re-releasing around 60 16-bit games for the rock bottom price of £9.99. Among the titles due for price slashing are Addictra's Football Manager (ST/PC), Hotshot by Salory (ST, Amiga, PC) and Anco's Thai Boxing (ST,Amiga).

Interphase, the eagerly awaited Mercenary-type game from Imageworks, is finally going to make it onto ST and Amiga in October, with a PC version to follow low at Christmas.

Have you seen Die Hard, the great Bruce Willis all-action movie, on video yet? If you enjoyed the film, you'll be pleased to know Activision is releasing a Die Hard computer game on all major formats this Christmas.

Activision also has the licence to the new James (Terminator, Aliens) Cameron film, The Abyss. No details of the games at the moment though

Kevin Toms, author of the immensely popular Football Manager footie-sim is just getting the finishing touches to World Cup Football Manager, just in time for The World Cup next year.

Microprose really cares about you gamesters: they've just spent another £2500 on their new racing-sim, Stunt Car Racer, just to improve the games presentation and graphics!

A staggering 9.1 million Super Mario Brothers Nintendo games packs have been sold in the US alone. How soon before the game is in every single American household? And how soon before Nintendo decide to design we Brits with that little old Famicom?

Meanwhile a number of industry observers are favouring the monochrome Nintendo Gameboy over the colour Atari Lynx, simply because of Nintendo's power in the market place

Vigilante - now coming to you for £5 more than you expected.

PHILIPS GO CYBERPUNK

Fed up with your tired looking video recorder? Well Philips may just have the answer thanks to its new VR6680 luxury VCR with built-in 3" colour LCD TV. The TV can be used separately from your normal TV and has a POP (Picture Outside Picture) facility. The price for having the "current" fast word in video decks is £599. Philips also has the ultimate personal stereo for all you hi-tech posers out there. The 3LC2050 is a combination of 3" colour LCD TV and AM/FM stereo radio, and costs £299.

THE ACE PC SHOW GUIDE

(Everything you wanted to know...but couldn't be bothered to ask)

Many of the computer games companies won't even be exhibiting at this year's show, and fewer still will actually allow you to see their wares publicly. But never fear, just read our definitive guide to what's not there, who's not there, and how to get where *you're not wanted*...

50 THINGS YOU WON'T SEE AT THE PC SHOW

(Entries correct at time of writing)

● Anybody on ACE buying a drink

● All Electronic Arts new games, *Aggressor* (Joe San s new fighter touted by many as the successor to EAs superlative inter ceptor, *Magic Fly* (an original game by the authors of the ben ient ST art package, *Flair Paint*, the new Bullfrog game (another game from the team that gave us *Populous...*need we say more?), *Ferrari Formula One* (on the Spectrum, C64, CPC, ST and PC) and Dragon Wars (the latest creation from Interplay, the guys behind *The Bard's Tale* series, *Battle Chess* and *Neuromancer*).

● Any Codemasters games We'll leave it up to you to decide whether this is a good or bad thing

● Anco has decided to forgo the hassle and bustle of the PC Show because it s a waste of bloody money and you don t need any body new Among the Anco selection you'll miss wil be *Kick Off* (Spectrum and CPC versions), *Player Manager* (the follow up to *Kick Off*, *Kick Off Expansion Kit* (you can never have too much of a good thing) and *Rally Cross* (makes a change from football).

● Digital Magic Software s two new releases, *Drivin'Force* (mindvehicle race-sim) and a multi-directional scrolling helicopter shoot-em-up.

● Perhaps thankfully, you won't see a lot of Emlyn Hughes, 'cause Audiogenic will only demonstrate *Emlyn Hughes International Soccer* (ST and Amiga) *Emlyn Hughes Arcade Trivia Quiz* (no comment), *Lone Wolf* (looks like you'll have to stick to the fantasy novels) and *Helterskelter* (on the PC), to a select few at a nearby hotel.

● AMOS, the Amiga version of Mandarin Software's popular ST games creation BASIC, STOS

● An extensive rage of Microprose titles including *Rainbow Islands* (coming manufacturer Taito, masterly follow up to Bubble Bobble), *Stunt Car Racer* (the latest game from Geoff Crammond, the programming genius behind *Sentinel* and of course *Revs*), *UMS II* (the one all ST, Amiga and PC computer wargamers have been waiting for), *Starlord* (Maelstroms s answer to Elite, with even more trading and action interestingly enough) *Star Gameweek* and *The Bug* (they ve all disappeared since last year's show)

● Jane Smith belly dancing 8.o(o)tron are at a hotel just round the corner from Earls Court)

10 THINGS YOU CAN SEE AT THE SHOW...

● ACE (that goes without saying).

● Ocean's *Batman* (hype springs eternal, and you might get a Bat man sticker, poster, badge or even the computer game).

● Bar that's where everybody is most of the time).

● Domark (the boys always come up with a new hardnared scheme every year, remember last year's London double decker bus, or indeed Jeff Archer the year before?).

● CRL (to pick up the newest Virus Busters program for your PC, ST or Amiga).

Jackson impersonator).
● Ocean (it's always worth a sec ond look).
● Jane Smith belly dancing (ll you can get by the hotel security)

THREE GAMES THAT STILL HAVEN'T MADE IT FROM LAST YEAR'S PC SHOW

1. *Damocles* (Novagen s follow up to *Mercenary* must have bro ken all records...it's being launched at the PC Show for the third year in a row).

2. *Ramrod* – Gremlin s surreal epic featuring miniature com-op machines, Peps cans and CD s was first mentioned in ACE issue One

3. *Interphase*, Imageworks solid 3D arcade adventure – formerly *Manframe*

4 An honorary mention must go to FTL/Microsoft's *Dungeon Master* explorat on kit, *Chaos Strikes Back*

THREE WAYS TO GET IN (WHERE YOU'RE NOT WANTED)

So, you've set your heart on attending that all-important press launch (lunch), here s a few way's you can go about it .

1. Pretend you're a freelance jour nalist. You'll need' acne glasses, mancassette recorder, notebook, an extremely boring personality

2 Pose as Jez Bitmap, creator of *Xenon Glider II* You'll need' acne, glasses, rucksack, anorak, hax binary calculator, and a fluent fine in hacking bullshit, '16 million colours on screen out of a palette of 2, every pixel a sprite, simulta neous scrolling in 37 directions...'

3. Pose as the Editor of ACE. You'll need glasses, notebook, bald head, harrassed appearance, and a copy of last month's letters pages

This year's classiest promotional stunt has got to be the amazingly mobile abdomen of Jane Smith, brought to you courtesy of Logetron, but you'll have to get past hotel security to see her...

● Virgin/Mastertronic (the latest in budget, fullprice, com-ops and Sega Carts).

● Infogrames *Drakken*, (one of the best role-playing games released this year) will be there

● US Gold (check out the Michael

SHOW DETAILS

The PC Show is being held at Earls Court, London from 27th September to last Octo ber between 10am and 6 30pm (5pm on Sunday) Remember the first three days are reserved for busi ness and trade visitors over the age of 18. More details from show organisers, Montbuild on 0203 464004

ACE LETTERS

CABLE GAMES

I am writing in reply to the letter about linking two ST's together with a serial cable or a 'datalink cable'. I made a 2 metre long datalink cable after buying Powerdrome.

My friend brought his ST round and we had a game of Powerdrome against each other.

Than Populous was released which also supported datalinking. We decided to make a huge datalink cable to go between our houses (we live next door to each other).

We bought a 30 metre rotary cable from Tandy and connected plugs to it. It worked very well and is still working now. We also played Falcon with this cable!

Level 122 of Populous is called VERYQUEER and is almost impossible!

Why did the ACE CARD competition stop? I got an ACE CARD about 6 months ago and the competition only lasted about another 2 months.

I have never won any competition and I hoped I would win something in the ACE CARD competition, but it finished before I even got a chance.

J P Boggis, Suffolk

Interesting to hear about your datalinking – has anyone else tried this? Write and tell us. As for the ACE Card, this scheme was started – and stopped – by the magazine's previous publishers. The good news is that we are currently setting up a replacement scheme to run in the magazine in the very near future. It'll be different, and a lot more interesting than the Card, so stay tuned.

SHOWBUSINESS

Could you please tell me where and when the next Commodore computer show is because I have just got an Amiga and I want to know more about all the games and stuff, so please tell me. Oh, and could you make sure it's in Britain!

Mark Kelly, Orkney

Next Commodore Show is on Oct 17th – 19th at the Novotel in West London. Call 0625 879970 for more details. You can also check out the ACE Diary section in the Pink Pages.

WEIRD

I, the supreme King of Gods am writing to tell you labourers how angry I am with those minor beggars down there, with their silly little idiosyncrasies. These preposterous metas happen to be the pamper programmers of Operation War. I am sick to death of the hideous mailboxes in between the levels of my little toy Amstrad CPC 464. I demand you to give me some of your petty cheap advice. Will £1m be O.K? I am sure you are the cheapest around!

The King of Gods

Get a disk drive – and send your cheque to the editor, marked Private and Confidential.

ON MATTERS OF DESIGN

I am writing for your advice on a small matter, which shouldn't be too much hassle for you to reply on. I've thought of what I consider a very good game idea which is definitely an original. I'm contacting you with the hope that you'll tell me where the best place to send it off to is 'Best' meaning a place where they do a good job and pay reasonable rates. Although tons of money is not essential as I would be very happy just to see my idea marketed, I consider money an extra-one which I can always use! Anyway, I hope you can aid me and please keep up the standard of ACE (no skimping on pages please).

Seth Cheeseman, Gwynedd

Selling game ideas isn't easy because you have to develop a relationship of trust with a software producer so that when you tell him about your multi-million dollar wheeze he doesn't fob you off with a pint and publish it anyway...

Best way to do this is to team up with a programmer whose work has already been published and who already has good connections. Failing that, the only way to go is the usual letter, phone call, meeting route – fraught with delays, pitfalls and disappointment.

O K, I appreciate that you can only spend so many letters in each issue of ACE but I must admit I was really peeved when I saw that my recent letter on game designing had been overlooked, or had it?

I refer to a letter I wrote to you concerning the articles 'Small Beginnings' by Jan Rigler in the June and July issues of ACE

To refresh your memory I am a game designer, but unfortunately I have no contact in the software industry and therefore I have had great difficulty obtaining any interest what so ever in my design from any of the software houses

The articles were full of good advice for up and coming game designers, but I'm just wondering whether it was a case of killing up space in your magazine and maybe you thought that no one would be that bothered about it

I am bothered about game designing, and I'm pretty sure that other people such as myself are concerned that the software industry is not taking a damn bit of notice of us. It looks like the magazines aren't taking any notice either, maybe they are on the same payroll and don't fancy the idea of giving out another slice to any one else.

Could it be that all my letters are getting lost in the post, maybe its a conspiracy against me, a black list, or maybe I have to join a club or something. Whatever the case may be, one thing's for sure; whilst there are software houses and computer magazines around that are too ignorant to be polite enough to acknowledge or answer a letter, the computer entertainment industry is going to be the loser in the long run. I, for one, will not buy any more games from software houses that do not have the decency to reply to my letters, and that lot is getting longer every day.

By my reckoning I'll have to sell my three computers before the end of the year! What a shame! What a waste!

R Barron, Nottingham

ACE has just moved offices (again) and there has been some trouble with mail. Rest assured everyone that mail is now being delivered regularly and things are getting back to normal.

As anyone in business will know, getting replies out of people requires either (a) that you have something they are desperate for or (b) instruments of torture. Try the London Dungeon for some examples of the latter. This should give you some idea of how to proceed.

If you want to sell your computers don't forget the ACE Readers Pages, eh?

14 Advanced Computer Entertainment

WEIROER

Don't you listen to Gnorth? Every god knows that the resident of No 1 Nether Realm, Milton Keynes is the legendary Joaster of Olympos. Pah! The only time Gnorth messes arround with volcanoes is when he cleans them out! By the way, the squashed bug on this letter is actualy Gnorth (I punished him for refusing to polish a tile in my bathroom).

And if you lot out there don't write to me, I'll use my godly powers to flood you with forms to fill in. Or I might borrow Sludge Vohled's £too-to-door salesman!

Soon I'll send in the details of Juollers cabinet reshuffle. Apparently, Poseidon's getting seasick and Hermes hates his silly winged feet.

Payne Ear, (Sign here)
God of Bureaucracy
Heavenly Customs Dept,
PO Box 666
Olympus

£200 BLOWOUT

I currently own an Atari ST which is fine for my word processing and music making, but I feel I need to expand more on my games playing and I therefore wish to buy a console, PC Engine or Sega Megadrive. I have both are very new and are fast machines in terms of speed of scrolling and animation.

I have a budget of £200 to spend and cannot decide which one to choose, so as you have obviously play tested them could you tell me which is the best and which one has more value for money and future prospects?

P C Smith, Gloucester

You say you want to buy a 'console, PC Engine, or Sega Megadrive', but most people would consider these consoles. None of these models are currently officially available in the UK, but Virgin's current strong support of the 8-bit Sega and their statement of intentions about the 16-bit Megadrive might be an indicator of future trends. In ACE 23 Nick Alexander of Virgin was quoted as saying that we might expect deliveries early next year. What about a Konix?

32 BIT BETTER?

Up until a few weeks ago, I had almost decided on which console to buy, the Sega Mega drive or the Konix Multi System or Nintendo 16 bit (I was planning to see the Konix in the PC show), but then I saw an article in some weekly computer mag about a new 32 bit console by Fujitsu!

AAAGHGHG!

ACE Letters page tippos shokk horrEr...

OK, it's true. We can't spell at ACE. Not even our owne nemmes. And larst month, the bloke wot checks the spelling went¾ on holly¾w diddn't hi? And wot happens, we get 181 errors on a single page.

So wot do we do, I arsk you? We sakk him, that's wot...

Jokes apart, though. We are absolutely grovelling in our apologies for last month's typos horror. At 2.00am in the morning, struggling to meet a printer's deadline that had been brought forward, anything can happen – and it did.

Here's a short, but sweat, collection of your (all perfectly spelt) letters taking us to task for the disaster. And just to show no hard feelings, we've given one of them the Prize Letter award...

ACE OUSTS GRAUNIAO IN TYPOS SHOCKER

Teh 24ij issue of ACE hit teh streets (and gutters D'lp joke) in a flurry to misplacde commas and text, and featrued for teh first time a Dily anagra rEadee lettters page , Wise old

industry obcrvers reckon hte pre-compu'tre Graunad's longstading record fro typos was smashed in a historic

this sigilka issue of hte WOrlds favonnal advandac computer entertainment magaskane   magazane

Still suffengn from hss wastfmg and birthday both hitting
c o - i n c i d i n g
39 on th e smae day, wt, ST freak recorfierr and perfnibed ACE reader
rOn smitH phoned edition Steve cOoka damandign, "so how com e yor man-adag to mak
e snch a lashvup of it them? Me an Dowsett coulnt find onee eample of teh
word 't e H spelt in hte ngiht order* ",
2WeIl we ve has a bit of bothre,' volnetteredg seper smoth Cook,29'd was all down to teh tram strike nol delrenrng our rubbars on tme for us to correct th e odd typo we We used to have a
litll
th rubb er on teh end of a 58 pencil, buttheydon't letus have anything sharp
here and
and powe lost it besides, we've gona lead   free now and
we were desperatie to got t he September copy out in time fro July but
we'll nearly got the Cknral tmas was ready now and tl you find a typo in that
it s a free subby and a prd of Ruddles for you, stand on me,' he enthused
Be thre al you you newss agent with your $1.50 on September 7th, excepl for
Hamish Grunter up in Glasgow, cos we tol him Octobem>

Ha Ha'
Have a free subby anway!
-agemenhs promisad as all a ink-rubber ech and we're all exiled ab
finest read in teh world for $1.50
ACO we
like getting it off your chess

Ron Smith, Southend On Sea

Ron Smith and the offending article

PRIZE LETTER

It's certainly nice to see that the staff at ACE have recognised that there is a largely untapped market for 'activity playbooks' in the computer world.

I look forward to the first full-blown ACE Puzzle And Sketch after such an excellent teaser in your last issue (No.24 – September).

No doubt thousands of readers enjoyed playing 'spot the error' as much as I did in the letters column. I managed to spot 104 'deliberate' mistakes, but I'm sure other readers out there can do better.

Next month can we please have a dot to-dot picture of the Konix Multi System.

Eastside Jimmy, Stevenage

Your wish is granted, though we thought it would look better if we joined up the dots before printing it. See pages 25–28.

I've just finished reading issue "24" and I've just got won questionn–''
JrdgING BY
the typEsettING Throught THE MagAnne   Is therE any ChanCE thAt prBlisherG OEDlin es causSED
a SOMEWHat ruShed ProDuCt..
Or is it just that none of you can spell?

Andrew S Torrance, Glasgow

How did you gess?

NAMBY-PAMBY

Alan Hughes of Milton Keynes and Mike Walsh of Basildon don't know what they're talking about. They say that games are too difficult for the riders, which part is well five. If you had a game that wasn't difficult you'd put it down after the first 5 minutes. Without difficulty, where is the challenge?

You might play a game once and not get very far in it but if you've got any guts then a few hours later you'd have another try, and get a bit better. If you could complete a game in one session then it was not worth buying in the first place.

Most people like a challenge. If this wasn't true then why are games like The Bard's Tale series, Last Ninja series, Elite and Blood Money so popular? Games players may well range from the lazy to the fanatic, but it is not always the fanatical players that send in tips and cheats NOR is it always the lazy players that ask for them.

Any game is a challenge. It's a challenge thrown down by the programmer to beat his game. Dungeon Master was one of the best programmers ever written and all Alan Hughes can do is to abandon it because he couldn't be bothered to map all the mazes and find all the keys. What does he want? To have it all handed to him on a silver platter?

I think it's time he stopped burying his head in the sand and looked around at what's going on in the world. Games designers have to live just like the rest of us. They don't design games just for the sake of it. They design games that they, often helped by the buying trend of the software market, think are going to make the public buy their particular product. If that means creating games with a challenge then that's what they create. If Alan Hughes bothered opening his eyes in his local software store he would see that there are games that cater for all sections of the software market, and a lot of them are fun as well as challenging.

On the other hand, I agree that software houses could do more in the way of offering help. Quite often everyone comes across a problem in a game, whether it's an adventure, Role-playing game or whatever, that they can't find a way round. Isn't it nice for someone to help you out with your particular problem enabling you to get further into the game. I'm on the Adventure Helpline at ACE and I feel quite happy to help people out with their problems because I know how it feels to be stuck in a game. But am I doing some of the software horse a work for them?

If you can't face a challenge then it's time to give up. The ball's in your court Alan.

Jim Laver, Herts

P.S. Game Designers 1
      Alan Hughes 0

I would like to answer Alan Hughes' letter in the September issue. I agree with much Alan said but I feel he generalises too much. The sort of games that are found in arcades are too hard and those of us who do not have the tenacity of a hardened arcade gamer are unable to get into these home computer equivalents. Most games also lack real depth, by which I mean retention at any level.

Now consider the pricing – at £25 for an Amiga game we have already paid for between 125 and 250 games in an arcade. After 3 games in the arcade people like Alan may have decided that the game is not for him, but with his home computer he is stuck with over 100 paid for guts.

However strategy war games have already found the answer I asked someone about Vulcan once. He told me he thought it was really easy as he could always beat the computer. When pressed further, however, he revealed that he knew little of the subtlety hidden in the programming, which means that the computer (or human) had to use different strategies so a player got better so as you progressed more things came to light and it was more fun.

I commend Alan for mentioning Silent Service. This game has 4 levels of difficulty and 8 submarines, environment, enemy, changes, 6 missions and 5 tours of duty. The score table is based on promotion for tonnage sunk which in turn is based on the combination at the above difficulties. A players could pick a low rating and still get high on the table if he sinks enough. If you picked a high rating, very little tonnage gets you on the table.

If a 48K computer can come up with enough variation to keep us occupied is it too much to ask that a 512K computer should produce better, at over £20 a game.

Gareth Foy, Belfast

Then while I was reading through Issue 24 of Ace and in there was an advert by Supervision Electronics which surprised me because they were selling a Nintendo 12 bit console! Is this true? Finally I heard from a friend that there is going to be a 16 bit PC Engine!! So can you please put me out of the mist and if you can recommend me a console.

B S Dhatri, Hampstead

The Fujitsu FM Towns is the latest you're talking about, but it's not available yet. As for choice, it's always advisable to save your cash for a machine that's (a) in the shops and (b) well-supported The 12-bit Nintendo sounds like a typo error – something we know all about here at ACE, eh?

The Fujitsu FM Towns

A. SINCLAIR'S FIRST LETTER!

I have been buying ACE from issue one and never have I seen such a well presented magazine. But you already know this. Never have I been tempted to write before. Yes I'm one of these 'never written before types' but I have just had this great brain wave. After purchasing Kickoff for my Amiga and getting thumped off the computer everytime I got a few friends round and we played Ice 2 tears solid in our own league. Everyone agreed it was a great afternoon and experience. Then it hit me, why not share the experience with local computer players and start a local league with either software or trophy prizes to the winners and runners up? "CALL THE NEWS OF THE WORLD" And maybe if we have enough people interested we could involve other towns or even city's, after all PBM games must have started somewhere! And it must have sounded daft at first.

Please could you tell me what you think of this and your expert views and criticisms on this subject. If you think it's a good idea or would like more info please call me and print this letter so that

everyone can share in this brainchild "But seriously Folks, THANKS!

A Sinclair, Gregwock

P.S Why not have an ACE READERS CHALLENGE where your EDITOR could show us how good he is at games playing against us mear mortals.

I'm surprised that you should have missed last month's ACE Readers Challenge, set by the editor for discerning readers. Called Spot the Misprint, it attracted a record entry See the panel for more details. The Software League sounds a great idea...

LOVE AT FIRST SIGHT MINUS ONE

Please can you help me in my quest for a computer game called Law of the West. I love this computer game and would be very much obliged.

Nick Higton, Surrey

If you've never met, how can you be in love? I'm just crazy about this woman Kay El-Fabma, but I haven't met her either. If you should see her, get her phone number and let me know I'll do the same with Law of the West...

GET THIS, MUM

I own a CPC 464 which I want to sell and get an Amiga 500 or Atari ST, but my mum is so far out of it that she doesn't know one end of a computer from the other. Please just say something – anything – that will make her change her mind and let me carry out my plan.

A. Swindells, Wiltshire

Don't let the little brat bully you like this, mum. Force Ferley's Kids with Ferley's rusks until he drifts into unconsciousness, then get out to the shops, grab yourself an ST or Amiga (both equally good buys and streets ahead of the CPC) and when he recovers consciousness, chain the little beggar to his old Amstrad while you have a bit of fun.

STATUS, STYLE, STEALEY...

Bill Stealey – the 'Wild' man of simulations software, pilot extraordinaire, all-American, all-everything really, has – I can EXCLUSIVELY REVEAL – made the first mistake on the slippery slope to rack, ruin, and bankruptcy....He's started appearing in his own publicity videos.

Said promo – for the 'quite soon' to be released on PC MI Tank – has Wild Bill dressed in his combat togs, reading somewhat haltingly, yet strangely compellingly, from an autocue, extolling the virtues of Tank. One is immediately reminded of so many American TV ads of car salesman flogging their new and quality used cars at low, low prices.

Yet as the promo goes on and the action moves onto a screen, Bill starts ad lobbing a commentary on the action. Now the guy really starts getting into it and genuine enthusiasm abounds as the missiles fly and 'Red Force' starts taking damage.

And there you have part of the secret of the success of Microprose. Bill Stealey is into games, bigtime. There are heads of companies that are into coding. Heads of companies that are into cash flow. Heads of companies that are into stocking the boot into other heads of companies. But how many guys at the top are really into the games themselves – with an almost fanatical devotion? Not a lot chum.

Mike Singleton's team at work for Micro Status – it's Midwinter Set in the near future (so global warming doesn't exist, huh?) It's cold and ice in an isolated community of humankind. Shame there's a baddy that's trying to spoil things. Just as well you, as leader of the Peace Keepers, you can recruit, order about and manipulate the inhabitants of this world. No – it's not Lords of Midnight with snowshoes, but expect it to be in the shops late in '89.

SENTINEL SUCCESSOR?

Tower of Babel – ultimate in DIY (Design It Yourself)?

Pete Cooke (Tau Ceti, Academy, etc) is going to be doing the Spectrum version of Stunt Car for Microprose. And he's just about finished an extraordinarily good thing for Microprose, called Tower of Babel inevitably, TOB is going to be labelled a '3-D Puzzle Game'. It deserves better treatment

TOB is a fresh and innovative game with you controlling remote droids who have to complete different tasks on each different level. Hmmm – that's like saying Unified Field Theory is about numbers. TOB is complex – but my opinion is that anyone that went pop over, say, Sentinel will find the same attraction in this one – which includes the most sophisticated level designer I've seen on any game ever.

Combine this with the kind of single minded fanaticism that is almost exclusively American and it's no wonder Microprose are producing great games right now (check out F15 Strike Eagle in this issue).

MI Tank Command, not out (again on PC), 'til September, IST and Amiga back end of '89) looks like the most detailed tactical battlefield simulation ever to hit a home computer. The Microprose in-house 3D graphics system is excellent – but that is only half of it. The different scenarios have you operating a tank platoon of four in concert with other friendly forces; mechanised infantry, artillery, air strike, chopper support. Modern warfare is a complex business – so is MI Tank. Close to completion, this one look like it's got more meat on it than a 16oz porterhouse. Yum, yum!

Microprose UK haven't been standing still either – despite the poor reception of the new Micro-Status and Micro-Style label's. With the acquisition of the Telecomp brands, it looks like there's a certain excess of labelling down Tetbury way, if anything Stirf, there is some good software in the works.

Geoff Crammond's Stunt Car on the ST was reviewed last month, but we neglected to mention Islap our wrists) the head-to-head version which has you playing against another person, via a serial link Yahoo!

Slows the thing down a tad, but it's worth it. The head-to-head function should be on the Amiga too. Expect other versions - Spectrum, 64, and PC later in this year...

MI Tank - close to completion.

Deep and Sophisticated MK 2 – Star Lure, programmed by Mike Singleton. Possibly the most intimidating game ever with up to 16 (provisionally) players fighting over the domination of a galaxy of a thousand or so stars. Robot II might not look flash – at this development stage – but for sure this one is going to have months of play in it...particularly as there may be a 'send a disc' PBM version.

FOOTBALL CRAZY?

There are a hell of a lot of tootle games about – and you want to know why? Footie sells, that's what. But what about the games?

Allegedly, even something as naff as *Roy of the Rovers* virtually flies off the shelves in Boots and a game as fab as *Matchday II Lion Ritman* – come back to home computing... all is forgiven? significantly depletes the world supply of magnetic media when released.

You'll have noticed the trend to try and licence named footballers onto games and there's a lot of logic in that, after all, certain players – particularly England caps – have followings, even if they move clubs. Even if you used to hate Spurs, Hoddle was obviously a genius (ducks down behind high substantial

Man Utd – club bought, game for sale...
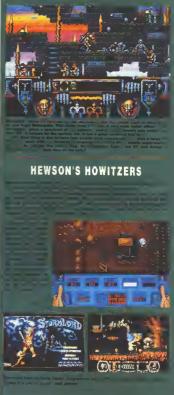
object to avoid volley of broken bottles).

But licensing a team? Slightly more risky if you ask me. First announced – if my memory serves me correctly – was Liverpool from Grand Slam. Now it appears that Krisalis, the software arm of development house Teque have got the licence to do a Manchester United game for the next three seasons.

Teque do, of course, do a lot of work in the conversion line, for Grand Slam. Any minor embarrassment here?

Knowing how cuddly Teque's Tony Kavenna and Grand Slam's Stephen Hall are (don't bitter at the back, please!) probably not. First out onto the pitch, however, will be Man Utd – which is a mixture of the traditional arcade football game plus a full Football Manager style of thing on top. Krisalis should be releasing that at the PC Show, while Liverpool will be appearing later on in the season – late Oct for Spectrum, Amstrad and PC, with Amiga and ST coming along mid November. Apparently the £20 million Knighton paid for the club didn't include the game rights time will tell whether he was right to ignore them!

HEWSON'S HOWITZERS

Stormlord from Raffaelle Cecco, programmer who takes it to a silicon as it is! well, almost

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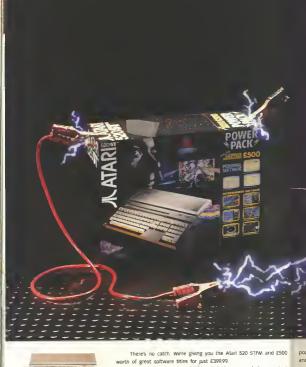
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MEAN MOTHER!

JOHN COOK DISCOVERS A NEW ARCADE BOARD WITH 2048 SPRITES

How is a game physically stored on a convop? On ROM as a rule, incorporated into a PCB (Printed Circuit Board) that is dedicated to that game. That is, if you took the ROM chips out of one game and transferred them into the sockets of another, chances are all you'd get is an entertaining burning smell and a hole in your personal cash flow.

There is a measure of standardisation however - the majority of PCB's have an input/output put of joystick, video and sound, conforming to an industry standard called — JAMMA. This means that all PCB's are rigged from cabinet to cabinet — as all cabinet combinations are rigged up to JAMMA standard.

All very well - but if an operator finds that Alien Genocide is slacking off on the takings and wants to install the brand new Vesuvian Bloodbath, he still has to buy a whole new PCB to fit in the old cabinet. Expensive, eh? For a brand spanking new state-of-the-art job, we are talking something in the range of £600-700.

The price tag is not too surprising - games are big-time expensive to develop, but more importantly, they are now becoming hardware intensive as the manufacturers throw more and more silicon at the boards to make them ever the more faster and fabber than ever before.

The trade is aware that this price tag is a little on the high side and has developed some strategies to try and bring the price of the games down, while keeping the standard up.

Capcom has tried to get around this problem with its new CP System Board (more about this little wonder next month incidentally) by having a standard base mother board and designing in the possiblity for changing the

Crackdown, System 24

game by simply changing the secondary boards, so cutting down the manufacturing costs. That's one approach Sega have tried something different with its System 24.

The System 24 mother board comes in a special 28" monitor, two player, three fire but ton cabinet - and it's get quite an impressive spec. Two 68000 control the show, but they have considerable hardware support, with hardware sprites (max 2048) and hardware screen splitting (two independently scrolling plus two windows), 4352 colours displayable out of a palette of 32768. Eeek! Add to this 1360Kg of RAM plus a 256K ROM and you have a machine with the vital statistics of Mass World.

But, as they say, that's not all — the secret to System 24 is that the games are downloaded into the machine on 3.5" disc. Therefore, the theory goes, instead of buying a new board for a new game, you buy a disc (plus a security chip, yep, a donglel. Cheaper than all those chips. On the downside, the basic system itself is not cheap.

'SYSTEM 24' MOTHER BOARD

SEGA

Games produced on System 24 to date haven't been that good — Scramblo Sports (ordinary 1942 clone), Gain Ground (intriguing top down combat/strategy game) and the much more commercial Crack Down (see pic). However, more are on the way — a golf game called Supermasters is here next — and as the programmers get used to the system, the games can only get better.

Whatever, as convops in general become more and more hardware intensive, we're likely to see this approach to cost cutting from other manufacturers, System 24 looks like being the way forward.

ESCAPE FROM THE PLANET
OF THE ROBOT MONSTERS

Atari Games have always been good for a laugh. Tongue-in-cheek games like Toobin' and APB have proved that in the past, with distinctive graphics and a touch of the absurd thrown in for good measure. Its latest, Escape from the Planet of the Robot Monsters, carries on that tradition - this time extracting the urine

Escape from the planet of the robot monsters

Advanced Computer Entertainment

Atari

from the come book sci-fi genre.

The scam? Jake [cool with sunglasses] and Duke [blonde ex-surfer] — Players One and Two — have to beam down to Planet X where evil Reptilons are holding captive thousands of human slaves and making them assemble a robot army that is destined [unless you can do something super-heroic to stop it] to destroy the Earth.

Me, I'd Nuke the place — but over the humanitarians the Yanks have you zapping about the place, taking out different brands of Robot, with ray gun, committing acts of wanton vandalism on the way. There's no question EFTPOTRM is cute.

The style of game is one more familiar to owners of home computer than arcade freaks — being in isometric 3-D. That takes a bit of getting used to, but the game plays well, and the animated antics of the two dudes will, more than likely, fix a grin on your face as you dash about the levels, liberating enslaved lembos.

There are three sections to the game — this man adventure, an all-end-of-level monster that looks like the Daddy of those little grits in the old Smash instant mash adverts plus another inter level bonus bit where you have to drive your speeder through a maze. So there's a bit of variety too.

A fun game that you'll find a refreshing change for the plethora of beat em' ups and Nemesis clones. Enjoy!

Winning Run – fastest polygons in the universe

WINNING RUN

Now here's a funny thing. Winning Run was previewed at this January's ATEI Show (the main trade show for the European Coin-op industry) ...but units are only now coming into general circulation. There's only one comment to make

Namco

here. Whatever you do – get on this machine!

Hard Drivin' was certainly a breakthrough product in terms of programming technique – filled polygons. Winning Run takes a similar technique (Namco call it the "Polygonizer") and makes it much faster, smoother, better. If you have any soul, after a few goes on this masterpiece, you will beg to have its children. It really is that good.

OK, so it's a racing game. A Formula One simulator even. But using the fastest filled polygon graphic system in the Universe. With the best race driving model in the Universe. With the best "throw your breakfast around" sit-in

Winning Run

unit in the Universe. In other words we think you'll like it!

At the start up you have two options – Easy (3 Speed) or Technical (7 Speed). Start out on Easy, but read even eventually get to reach Technical and at that time the car takes on all the properties of a Formula One beastie. Not easy to control, John. No slamming the foot to the floor all the way around here!

Winning Run

Even so, Winning Run is still a very playable and accessible game – with a host of touches that blatantly show off the superlative technical achievement of the unit. See those wheels – that's no sprite, they're made up of lots of little polys. So are all the other cars. See the palette fade up through the colours from background to foreground – just as if they were coming out of the haze. Wow!

Some things are better experienced than described on paper. Winning Run is one of these things. Suffice to say it is the ultimate coin-op driving experience to date. Play it!

[Thanks this month go to all at Deith Leisure, Paul Ashley at Brent Leisure and last but not least, Kevin "Hard Drivin'" Williams at Electrocoin.]

HI-TECH DIRTFOX

Namco's next release using the technology it's developed for its fab games Assault and Metal Hawk is a driving effort called Dirtfox. Can't tell if it's any good yet, but we should be taking that classic 'in-depth' look next month.

THE REAL THING

The Konix console is here. Is this the ultimate games machine we've all been waiting for?

You know you're in for something out of the ordinary as soon as you get your hands on the Konix console. The unit is large compared to other consoles, but lightweight and, due to its compact design, it almost feels smaller, yet the abundance of knobs, interfaces, and expansion ports means you can take five minutes just finding out what goes where. It's an exciting process.

The Konix is a racing car, an aeroplane, a motorbike – it's what you make it. The U-shaped base has a spindle running between the two straights of the U and the man controller rests on a column attached to the spindle. This controller can be pulled towards you or pushed away from you. A three-way clutch release knob on the left arm (viewed from the front) of the U base determines whether the centre column remains locked or is allowed to swivel between two positions.

Four control modes are possible, car, motorbike, helicopter, and aeroplane. Between them, these cover just about every simulation program you're likely to tackle, although we thought the omission of a periscope was bad news for Microprose In car mode the central pillar remains locked. The steering wheel is pulled off for aeroplane mode and the central pillar allowed to move between two locations. For motorbike mode the control pillar is pushed forward and locked while the handlebars are produced by swivelling the handgrips.

Helicopter mode involves laying the central column flat and connecting another controller. This isn't supplied, but will be available as an addon.

Particularly clever is the 'jodderer' in the central column which can be used by programmers to produce tactile feedback. Another neat design feature is the way the fire buttons on the steering wheel engage with the handlebar buttons when the wheel is engaged

– a simple mechanical solution that avoids the need for electrical interfacing between the wheel and the main unit.

Push the controller forward and your craft rises, pull the controller towards you and your craft descends; crash and the controller judders... Never before have air combat and racing games had the chance to be so realistic. Unfortunately, the only software we were able to test on the machine (set panels throughout this feature) did not make maximum use of the control possibilities, though there may be some suitcases who would like to play Last Ninja II with using the aeroplane controller

ROCK AND ROLL YEARS

It was Wyn Holloway, Konix boss and designer extraordinaire, who originally thought up a design for a radical new game controller. He set his engineers to work on some electronics to power it.

Enter Cambridge-based trio Martin Brennan, Ben Cheese, and John Mathieson (known collectively as Flare Technology) whose prototype Flare One was exclusively reported in ACE Issue 1! Flare needed a company to mass produce its machine – after approaching several hardware manufacturers like Atari and Amstrad, Konix expressed an interest.

After negotiating a 16-bit processor, larger colour palette and even greater chip integration, Flare and the Konix engineers came up with the hardware.

Because there's no keyboard or in-built language on the Konix, programmers have to use DOS systems to squirt data into the console during development. A gang of five Birmingham University graduates – Chris Gates, Fred Gill, Martin Green, Jon Steele, James Torrpissen – wrote the low-level drivers that enable the PDS to communicate with the Konix development system. In addition, the ATD lads (Altribon to Defrel) created an art and two sound packages to help programmers convert existing file formats (Dpags, Neochrome IFF, sound samples and the likes) to something the Konix can cope with

ACE breaks the news about the Flare One...

JOY DIVISION

More conventional control possibilities are available, however. On the same arm as the three-way clutch are joystick ports 1 and 2. These accept standard joysticks for control of traditional hand-style platform games, arcade adventures and the like. Since most early games will be conversions of existing hits and will consequently require traditional joysticks to operate them this seems fairly essential.

However, there's more to these joystick ports than meets the eye. Two Konix machines – one powered and the other not – can be connected together so two-player action. Joystick port 1 on the powered master machine is connected via a lead to joystick port 2 on the second console. The second machine acts simply as a very complex joystick. Unfortunately, you can't attach a Konix console to your micro and use it as the ultimate/most expensive game controller

We got our hands on a pre-production version of Mev Dinc's **Hammerfist**. The game features several simple scenarios which, combined with large sprites and brilliantly drawn backgrounds, simply wouldn't have been possible on another machine. The feel of the software isn't much different than that running on an ST or an Amiga, except for the speed - which is mindboggling!

Another next design point here: the double joystick port is actually a single 25-pin D connector with some of the pins removed, further cutting production costs. Other machine manufacturers might take this up.

Incidentally, joystick port 1 will be used by the helicopter controller (when it appears) and port 2 will be able to accept a keypad. This latter point could be a vital feature for the Konix as future, as it would allow alphanumeric entry, something other consoles keep promising but are always slow on delivering. This is particularly important for the Konix, since the hardware is strong enough to support a highly complex flight simulator or similar program, and as anyone knows these need more than simple mechanical control - you really do need keyboard entry to cope with all the parameters during flight.

On the subject of game controllers, a pedal unit comes with the Konix console. This plugs into the back of the console and comprises two pedals. Each pedal contains two microswitches; one located at the top and the other at the bottom of the pedal, and the unit has a responsive feel to it. The programmer must decide how best to use the pedals, but typical applications could be a brake and accelerator in a racing game or left and right controls for a tank's catapillar tracks.

The console's right arm houses Start and Select buttons and a lever that can be used in various ways. Programmers can detect the position of the controller and could, for instance, use it as a throttle, gearchange lever or weapons selector. Further evidence of clever design: the position of the lever at start up determines the default volume level for music and sound effects.

ATD's Art package: the palette on the right gives you some idea of the enormous range of colours available.

INSIDE STORY

If you've had a peek at the circuit board inside almost any computer you will have discovered that it virtually fills the inside of the machine's case. Because there's not much room inside the Konix console, the circuit board hasn't got any choice but to be small. Unbelievably the board is little bigger than the double-sided drive (7.25 by 4.75 inches). And the component count is extraordinarily low. Forget very large scale integration - the Konix design meant ultra large scale integration had to be employed. Just about everything of any importance is contained in one chip: sound and graphics handling, disk controller, blitter ROM, fast RAM, arithmetic and logic unit, coated ports. It's a monster 160-pin slab of silicon known as an ASIC (application specific integrated circuit).

Apart from the ASIC there's 256K of RAM on two pseudo-static memory chips (pseudo because the chips have their own on board refresh unit) and an 8086 processor clocked at 6MHz. This 16 bit processor is slightly redundant. The original hardware design line tuned an 8 bit processor, perfectly adequate given the power of the chips it is working with, but Konix wanted the 16-bit cachet and the developers gave it to them.

The video controller inside the ASIC is capable of three resolutions: 256 by 200 pixels using 256 colours, 512 by 200 using 16 colours, 256 by 200 using 16 colours. The colourful low resolution screen uses up 50K of RAM - each pixel taking up one byte. While that makes for less screen operations, it does mean that a large chunk of memory is unavoidably used.

BYTE THE BULLET

The low res byte per pixel mode will probably be the favourite for games programmers simply because graphics manipulations are easy and fast. A typical ST

or Amiga screen is made up of four bitplanes. Each byte of a bitplane corresponds to a row of eight pixels on screen. The video chip has to combine information held in the same area at each bitplane to find out the colour of an individual pixel. It's an inevitable performance which requires four reads just to find out what is actually stored in one location on the screen. All this is just one quick simple operation with the Konix's video controller.

512 by 200 pixel mode

ASIC - computer on a chip.

also uses up 50K of memory. However, in this case each byte looks after two adjacent pixels. The third mode is the most economic only requiring 25K of RAM. Again, every byte takes care of one pixel.

Colour is determined by a 12 bit palette. The number of combinations you can fit into a 12-bit register is 4096. Even though the screen modes are comparatively chunky, a palette of 4096 colours means that some very fine shading is possible - particularly when 256 colours are used. There really isn't any reason why you should have to put up with chunky graphics. Good anti-aliasing techniques will see to that.

If you're not concerned at losing colours - end, frankly, it gets tricky trying to find uses for 256 of them - the screen can be split into areas of different modes. The Konix takes this further than other machines: you can set each byte of screen memory so be either one low-res or two high-res pixels. The possibilities are mindboggling.

For performing operations on chunks of memory there's a 16 bit blitter that can move nearly 5Mbytes of memory in a second or two 50K screens every frame

refresh. But it's not just conventional memory moving that makes the blitter special: if the screen is set up correctly the chip can perform collision detection and depth-sorting tasks automatically.

PUMP UP THE VOLUME

The most impressive portion of the ASIC is the RISC-technology digital signal processor (DSP). RISC technology is also used in the ARchimedes and involves processor design that, instead of performing a large number of very complex operations (as the 68000 can), offers a smaller number at very simple operations - but performe them at very high speeds.

The DSP can move a 3D object consisting of 3000 vertices 50 times every second. Although the DSP's clock speed is 'only' 12MHz (12 million cycles or operations per second), while a typical 68000 instruction takes four, eight or 12 cycles to execute, a DSP instruction only takes one.

The DSP also has a 16-bit 12 million instructions per second (MIP) arithmetic and logic unit. Multiplications can be calculated over 50 times faster than the 68000 in an ST or Amiga.

Because of its processing speed the DSP could be used extensively for media-heavy operations, 3D simulations, say. By combining the power of the blitter and the DSP it is possible to calculate and display 3D rotations at amazing speeds.

Because it is also in charge of generating sound a ROM look-up table helps it synthesise FM sounds. But that's just one type of noise - samples can also be used. And these can be anything up to 14 bit in quality. Not quite 16-bit CD sound, but close enough. You can emulate virtually any type of sound generation so long as you write the drivers. Yes, it's nice. Even more so when you realise it is capable of 16-channel - maybe more - sound in stereo.

RAM IT HOME

Unlike other game consoles whose software comes on some form of memory card, Konix machine includes a 3.5-inch double-sided drive in the design. The disks can hold 880K of information and, because of the machine's hardware, access to saved data is possible while a game is running. Since disks are currently a lot cheaper than memory cards (and likely to be for the foreseeable future), this has to be good news.

Konix in conjunction with firmware designers Attention To Detail, reckon to have come up with a disk format that will defeat crackers and commercial pirates but naturally they're being coy about revealing details. The upper limit price point for games has been set at £14.99 - almost half the price of existing console games.

Two moulded 'exhaust ports' at the back of the console provide connections for everything from power to peripherals. Power is supplied via a power pack. It's a pity this couldn't have been placed out of sight inside the Console's casing - unfortunately mechanical and electronic parts are to blame for the lack of room and these would have been serious heat dissipation problems. A 13-pin DIN Alan ST-like connector is used to supply the video signal to any RGB linear/Scart monitor. There's also a modu-

Playing Ninja II on the Konix is an experience! Converted from ATD, the game literally scorches across the screen. Although the software doesn't make use of the dedicated controllers (you'll have to wait for the next Konix a Konix release for that) it has several features that couldn't come on any other machine - especially the flickering, colour graduated energy panels at the bottom left of the screen.

later socket for seeding the output to a TV. Sound is sent through a 3.5mm stereo jack. An 8-pin DIN socket is for plugging in peripherals like the light gun or moving chair. Finally, there's an expansion slot for an extra 512K of memory or game cartridges.
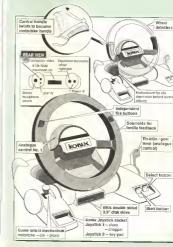
That, then, is what the Konix console offers externally. It's a compact unit about 15" deep and almost as wide in tough plastic and superbly designed. In fact most people do a double-take when they see it with the steering column raised since it's hard to believe that anyone could fit a motherboard inside, but then that's the other side of the story. See the panel on the right for full details.

BACK TO REALITY

It's very easy to get carried away by the Konix's specifications, particularly when reading through them for the first time. When you sit down and work out exactly what's gone on you realise that, while unquestionably powerful, the ASIC has to do a hell of a lot. The DSP in particular must generate sound and perform 3D transformations. Neither are light on pro-

Ninja II looks like it is going to clean up on consoles even more than it did on home computers. System 3 boss Mark Cale is ecstatic about his new deal to launch the game for the Nintendo. With potential sales of a million units in America and the fact that the design of the Ninja game is ideally suited to consoles he has every right to be. Meanwhile, Ninja II on the Konix looks stunning. More colours on-screen, blindingly fast action, and superb graphics make it a visual and gameplaying treat. Let's hope all Konix software is like this!

Sound control: current sound generation software is still quite primitive as far as graphical presentation is concerned, but the results are very impressive, especially where samples are concerned.

PROGRAMMERS SPEAK

The Konix has received mixed reactions from the software industry - perhaps a reflection of our British tendency to slag off anything we do well. From the beginning, however, Mark Cale of System 3 has emerged as chief Konix evangelist. Cicling less enthusiastic members of the UK software trade Cale rails. They are being """" to him (Wyn Holloway, boss of Konix). What do they want? Do they want the Japanese to completely take over the business and dictate to us what we can publish, where we can publish it , and how many units we are allowed to sell?

All irms that sign up to do a game for the Mulli System pay £2,000 for a development kit. The money is payed back as soon as the game is delivered. Duplication of the disks is handled by Konix themselves with a guarantee of zero piracy thanks to a built in security device. No restrictions are placed on developing the Konix title for other systems if the sort were house so desires – unlike Nintendo, for example, who insist any title developed for their games console must be theirs and theirs alone.

This is all mirth-channel music to the ears of the software developers. But there is a fly in the ointment. If the machine is so marvellous why does it need conversions from lesser machines to prove its worth? Where is all the original Konix software? The answer is that the 'Konixisty' of the titles will still shine through. Ocean's Run The Gauntlet (or example utilises the Mulli System's variety of controls – with the player changing from steering wheel, to joystick, to flight controls to drive the various craft that the player must handle in the game.

Argonaut's Bikers – which will be packed with the Konix has also been designed specifically to the powerful driving manoeuvrability of the Mulli System controller. Argonaut are also working on a version of Starglider II – code-named 'Revenge of Starglider' again specifically coded to make the most of the Konix helicopter controller. Check out the Soft ware Schedule box for other titles under development

Meanwhile, the big boys in software publishing are strangely quiet on the subject. Rod Cousens, boss of Activision, told ACE 'We have a problem because no-body has hard images. so in a sense we are involved in Konix development Cousens hopes that the Konix will succeed 'We wish them well. Conceptually the machine is excellent'. But this excellence has not been sufficient for Activision to convert any of their own label titles for the machine. Despite the good wishes Consens states 'N6 Activision titles are currently under development for the Konix'. At US Gold Geoff Brown states firmly that there are no current plans for the company to develop Konix games. But Konix software manager Jon Dean remains confident 'One aim is to have twenty four quality titles available for the Mulli System within twelve months of launch.'

Nick Speakman, spokesman for Binary Design
There's no question that the custom chips are very powerful, but they require a lot of programming talent to get anything out them. The screen handling isn't as fast as we anticipated it to be. But then when something is hyped out of all proportion it never is as good as you expect it to be – take Batman, for example.

Jeff Minter, Llamasoft
I can't see major coin-op conversions like R-Type being particularly well implemented on the Konix. You want to interact with the machine's superb game controls, not just waggle some joystick

Brian Pollock, Logotron
My only concern is memory, or lack of it. For instance, in the game I'm writing I am using six channel FM synthesised sound. Now this takes up a hell of a lot of memory. I couldn't usefully fit any more samples, and that's sad.

Chris Walsh, Argonaut
Polygon-based games like Starglider II are going to be easy to program. The machine is geared up to rotating masses of vertices and incredible rates. It's as though the designers of the machine were obsessed with producing something that could shift polygons quickly

THE ACE VERDICT

Although more expensive than when first announced, currently due to be priced at 'over £200', the Konix could make a very attractive this Christmas. In the mid-term, the only competing machines are likely to be the Sega 16-bit machine or the Fujitsu FM Towns, neither of which are planned for sale in the UK mitil next year (if at all).

The Konix is British, superbly designed, and extremely powerful. Provided the software base shapes up, we have no hesitation in recommending it. The company expect demand to outstrip supply before Christmas, so if you see one on the shelf think twice before passing by

SOFTWARE SCHEDULE

Here's a short checklist of games currently under development for the Konix and due to appear before the beginning of 1990.

Bikers (comes free with the console),	Argonaut	Manchester United FC	Krysalis
Konix Chess	Konix	Mr Do's Wild Ride	
		Revenge of Starglider (working title)	Electrocoin
			Argonaut
		Robix	Binary Design
		Run the Gauntlet	Ocean
		Swing Simulator	ODE
Starray	Logotron		
Super Ski Simulator			
		Tunnel of Doom (working title)	Microids
			ATD
Vendetta	System 3		

Logotron's Starray - screenshot shows the current state of development of the Konix version. We can't wait!

GAMES GET MEAN...

ACE DEBATES THE RECENT ADVANCES IN PROGRAMMING POWER

Readers' letters over the last few issues have been suggesting that games are getting too difficult, flight sims too complex, RPG's too unfriendly. In a world where even Chess Grandmasters have to resign in the face of mighty silicon opponents, have the programmers left the players behind? Andy Wilton visits the Computer Olympiad and asks whether might be right...

O
kay, what's the oldest computer game in the world? If you think it's Space Invaders, Pong or PacMan, you aren't even close. If you plump for Adventure or Star Trek you're still miles out. If your reckon it's chess on the other hand, award yourself two pawns and a pat on the back. Computer chess pre-dates those other games by so long it just isn't funny.

Computers were taking on humans across that black-and-white board in the 1950s, and the building blocks were laid even earlier. Incredible as it may seem, the principles of computer chess were first set out by Professor Claude Shannon, an American mathematician, over 40 years ago. Shannon presented his paper 'Programming a Computer for Playing Chess' at a conference in New York back in the spring of 1949. To put that in perspective, the atom bomb was five years old at the time, while AT&T had just invented something called a 'transistor'.

All modern chess programs are based on the ideas in that 1949 paper, but this doesn't mean standards of play have stood still. There have been huge improvements in programming techniques since the '40s, and processing leaps in hardware power (the 'transistor' came in quite handy) so the same basic structure of program can now play a very mean game indeed. Prof Shannon had the chance to gauge this progress for himself last month, when he presented the winners' medals at the 1st Computer Olympiad.

A grand tournament of computer gameplaying programs from around the world, the Olympiad drew an impressive 85 silicon contestants to the ballroom of London's Park Lane Hotel. Chess was by no means the only game in town: there were contests in a dozen other boardgames, from friendly old backgammon to the formidable fullsized Go, plus some fierce competition for bridge and dominoes models.

All this gives the world's top boardgame programmers a chance to compare notes, discuss techniques and above all test their creations against the toughest (computer) opposition going. At the 1st Olympiad the results weren't always to their liking, as it turned out: every night of the week-long contest, teams of programmers worked late into the night trying to fine-tune their entries. Some programs made alarming leaps in performance from one

Apple Macintosh and Acer PC do battle in the 19x19 Go tournament. The formidable game of strategic insight proved a bit too much for the UK teams: they placed seventh and tenth in a field of ten.

day to the next, as the pressure of competition showed up embarrassing but fixable weaknesses.

TAKE THE MONEY

This will to win isn't just the computer equivalent of Olympic spirit – there are frighteningly large sums of money at stake here. The Go competition, for example, also served as the European heat of Acer's World Computer Go Championship, an event with a great deal of prize money attached. As well as bus fares for travel to the Taipei finals, Acer have offered a mind-numbing US$1.4 Million for the first computer Go system to beat a human champion.

Nobody's offering that kind of cash for a similar chess achievement, but in a way the potential financial rewards here are even greater. The leading contenders, it transpires, were all computer prototypes for future versions of commercial chess machines. The incentive to win was obvious: beat the competition in the Olympiad, and you can have the result on your adverts when the finished machine goes on sale. The contest went all the way to the wire, with the Dutch Rebel grabbing gold. The dead heat for silver was eventually resolved in favour of the Anglo-German Mephisto, with Fidelity taking bronze back home to the States. If you want to buy shares in a few chess machine companies, look no further.

YES, BUT WHY?

Money is one thing, but most of the contestants are in it for more complex reasons, and it's here that we start to stumble across the power-programming mentality that spills over into the games market, well, possibly unpalatable effects. We're talking about competition here: the possibility that you can actually test your programming abilities in a fair contest against a worthy opponent. Computer chess intrigues the man in the street because it lets him engage a machine in mental combat: it intrigues a programmer, on the other hand, because it lets him engage other human beings in mental combat. This is all very well, but although there's a fascination for the onlooker at the Olympiad, the novelty soon wears off, and in its place some more depressing thoughts crop up. Watching a dozen chess programs slug it out, you're left with a strong impression of wasted effort.

It's all a bit like the early '80s, when you could quite easily line up a dozen arcade titles for the Spectrum and find that they were all the same game. That's not to say there was any borrowing of code going on: quite the reverse. You could get a dozen Space Invaders clones, a dozen PacMan rip-offs or whatever, and every one had been written from scratch, quite independently of the others. What was so strikingly was the amount of work that had been wasted on re-inventing that software wheel. Nobody

SOFT BUT STRONG

The Olympiad is very definitely about software rather than hardware. In fact, there's no standard hardware set-up for contestants to use in the Olympiad, so a list of the machines entered makes interesting reading. About half of them were PC clones manufactured and supplied by the evening sponsors, the Acer Corporation of Taiwan. The others ranged from creaky old 8-bit micros like the Dragon and Atari 800XL up to state-of-the-art Sun workstations, with the middle ground made up mostly of STs, Apple Macintoshes and – in surprisingly large numbers – Acorn's 32-bit Archimedes.

With a spread as wide as that you'd expect there to be some kind of handicapping system, but in fact the organisers didn't feel one was necessary. It's true that both of the Snns did win their respective tournaments,' explained the Olympiad's creator David Levy 'That was down to software rather than hardware though: I'm quite sure those programs would have won whatever they were running on.' You might still feel that the SUN's purpose-designed SPARC processor had a little bit to do with those victories, easily outstripping the Archie's blistering ARM chip as it does, but hardware power really isn't everything. Victory in the Renju (a bit like zero-gravity Connect Four) went to a Soviet program running on that Dragon, nothing creaky about the software, it seems

Mine's running on a Commodore 64... What's yours on?

needs a dozen PacMan games: if they're all competently written then any one of them would do.

Since the average amateur chess player could be soundly beaten by 90% of the computer chess games on the market, it seems like there's a PacMan-style glut here. Reading may well be better then Mephisto, but if Mephisto can annihilate you at five seconds a move, the difference is really a bit academic.

Of course, that argument's not entirely fair as applied to the Computer Olympiad contestants. After all, a competition like that has nothing to do with usefulness. To take an athletic analogy, if you need a piano moved it doesn't really matter whether you get a silver-medal weightlifter to do it or the guy that beat him for the gold. Either bloke is strong enough for practical purposes, but that's irrelevant as far as weightlifting fans are concerned: they want to see which one can lift more, even if the difference is only a few bags of sugar.

Computer Olympiad's creator, David Levy, made a bet in 1968 that he computer could beat him in a chess match within ten years. In 1978 he collected the money - £1250 - after seeing off North-western University's formidable Chess 4.1. Things have come a long way since then Levy reckons computer chess will be on a par with human champions in 30 or 25 years. So will he be taking any more large bets from now on? "I won't even be taking any small ones," he replies.

There's nothing wrong with this competition mentality if it's kept where it belongs - in competitions, that is - but unfortunately it does stray over into mainstream gaming. How many chess games are advertised on the basis of the strength of their game or the size of their opening book? Almost all of them, of course. Words like 'strength' sound good, don't they? The thing is, 'strength' here really means 'difficulty'. These adverts are effectively saying 'buy our game because it'll thrash you hollow'. Would you buy a shoot-em-up if it was guaranteed to wipe you on anything past level 1?

Even if you look at it from the technological point of view, there are still shortcomings. That all-powerful chess program may be in its element in competition with other chess programs but for the rest of us it's still another chess program. Again, would you buy yet another shoot-em-up simply because it boasts more sampled sound than ever before? Or more colours on-screen? That sad truth is that you might, because that's what the market is throwing at us right now, but let's not forget that colours and sound are no good without gameplay...

BRANCHING OUT

With the exception of Scrabble, all the boardgames played at the Olympiad are two-players, zero-sum games. 'Zero-sum' here means that whatever's bad for one player must be good for the other and vice versa. (Not all games are zero-sum: in zero-sum games the players' interests are utterly opposed, and any sacrifice is justifiable provided your opponent suffers more than you do.)

Leaving aside backgammon, the games are also all games of 'perfect information': that is, both players can see the complete state of the game and neither has anything 'up his sleeve'. Rank Attack is a game of imperfect information - you can see where enemy units are but not how strong they are - while the simultaneous orders of Diplomacy makes the game similarly unpredictable. Random elements are the most common reason for imperfect information, hence the exclusion of backgammon.

These similarities mean that, despite the differences in rules, the games are all programmed in much the same way. In each case, the computer works out the best move by considering ways that the board could look after several moves have been made. It mentally makes every possible move from its current position, every reply its opponent could make and so on, searching for a 'continuation' (series of moves) that leaves it in the best position possible. In doing this the program assumes that both it and its opponent make the best moves available to them - that each tries to improve its own position at the other's expense, in other words. This 'if I do what's best for me and he does what's best for him...' process is called a minimax

search. Along with alpha-beta pruning - a way of reducing the time wasted on bad moves - minimax searching is the backbone of two-player games programs.

Tournament rules and minimax patience put limits on the time a computer can spend on the search, the 'deeper' a program can search (the more moves it can look ahead from the current position), the better it will play, but deep searches take much longer. The crucial factor here is the 'branching factor' of the game under consideration, that is, the typical number of moves available to a player. Where a game has a low branching factor - less than 10, say - the program can expect to look as many as a dozen moves into the future. Larger branching factors force the program to make do with a shallow search, and thus play a poorer game.

SOME EXAMPLES:

CHESS
With a medium to high branching factor - a chess player typically has over 30 moves open to him - this game can't easily be analysed in depth. However, it's essential to look a long way ahead where pieces are being swapped rapidly, so most chess programs concentrate on these, and only take a shallow look at quieter positions. This key idea, since spread to most capture-based boardgames, was the central plank of Shannon's argument back in 1949

DRAUGHTS
On an 8x8 board in particular draughts has a low enough branching factor to quite deep searches. Even on the large continental (10x10) and Canadian (12x12) boards the rules of a compulsory capture tend to limit a player's available moves quite drastically. As

a result, modern draughts programs tend to be quite strong in human terms

SHOGI
Played on a 9x9 board, this chess like Japanese game is greatly complicated by the ability to 'drop' captured pieces: that is, to put them back anywhere you like on the board and use them against their original owner. Once you've captured a few pieces, potential 'drop' moves alone can run to several hundred at any one time. With conventional board moves as well, this gives a huge branching factor and makes intelligent computer play very difficult. Shogi was not represented at the Olympiad. The Japanese either didn't know about it or weren't interested. With such a serious language barrier it was difficult to tell which, Olympiad organiser David Levy explained.

GO
Fiendishly complex as it is, the Japanese don't rate Shogi as a truly intellectual game. For that they have the far more difficult Go. Played on a 19x19 board or in cut-down form on a 9x9 board, Go is all about surrounding and thereby gaining ownership of territory. Players take it in turn to place stones - the game's uniform, featureless playing pieces - on the board's grid, gradually building up areas of control. It's subtle very strategic and - with a branching factor that starts in the hundreds extremely difficult to program. Again, there were no Japanese entries at the Olympiad but Taiwan had several unlike Shogi, Go is also played in the Chinese-speaking world, under the name of Wei-Chi. Oddly enough the medallists on the full-size board were Polish, Dutch and Swiss, with the strongest Taiwanese program relegated to fifth place.

As for the challenge of a tough game, you can always turn down the difficulty when you find the game's too hard - but in that case, what was the point in having that strength there in the first place? Wasn't it just a red herring? Getting back to chess, take the extreme case of a leading dedicated machine, the Novag Super Expert. Raymond Keene, one of the Olympiad's organisers, recently played 59 games against the Super Expert: he won 40 of them, drew 7 and lost 12. Raymond Keene is an International Chess Grandmaster if the

This US entry, Neurogammon, did have one slight advantage in the backgammon competition: it was running on a hyper-fast Sun workstation! There may not be any steroids in computer athletics, but Sun's reduced instruction-set SPARC chips come pretty clean.

Super Expert took 12 games off him, how many casual players are going to use even a fraction of its power? The tone is rapidly approaching where all the normal man in the street can do is pray for a 'System Error', or resign...

SO WHAT?

This drive for the ultimate chess-playing program stopped benefiting us mere mortals some years ago, but that's not the whole point. More importantly, there are plenty of other games that the wasted programming effort could be applied to. It's like that PacMan clone business, what was so painful about that duplication of effort was the way it took up resources that were badly needed elsewhere. All those programmers with the know-how to handle sprites, sound and collision detection were wasting their time copying an existing standard when they could have been creating original games. If you take a dozen PacMan look-alikes, you're actually looking at eleven missed opportunities for original, interesting gameplay.

A WHOLE NEW BOARDGAME?

What we need is a bit of that chess effort redirected to other promising games, or even new game designs altogether. Why, for instance, doesn't someone program and sell a micro version of Chinese Chess, or its Japanese counterpart Shogi? Why aren't the shops full of Cobustus Go or Sargon Award? It's true that these games lack the ready-made slick market of chess or bridge - the droves of people who already play the games in their wooden or cardboard forms - but that shouldn't stop software houses making money out of them. After all, the only Shogi game on the market would surely do better than an average-selling Chess game.

There's no need to go that far afield for suitable games. Over in the States at the moment, the Amiga game Distant Armies is building itself a following among chess buffs. It's actually a compendium of chess variants and precursors, starting with the ancient Indian game Shaturanga and working across the Middle East (and Middle Ages) to the European form settled on as a world standard today. It's easy to understand the appeal of these games: while they're similar enough to modern chess to be easily learnable, they're different enough to make you work out your own strategies. In particular they discard the tedious 'opening book' learning: ancient Persian books on Shatranj are rare things indeed! - making casual play far more rewarding. Wouldn't you rather rely on skill than parrot-learning?

If programs like Distant Armies catch on in a big way, it won't be the first time money's been made out of resurrected games. Probably the world's most programmed boardgame after chess is the one that Japanese game moguls Amar Company Inc market under the name Othello. Under its original name of Reversi the game did moderately well at late-Victorian England, but with its new name and some heavy marketing those distinctive flip-over discs made Amar an absolute fortune. How many other equally good but now forgotten games could do just as well? Mark my words, someone could yet make a killing out of Faene Chess!

As for new game designs, purpose-written boardgames are just as promising for computer success. Take Mastertronic's excellent 16-bit think-em-up Infection. While it's chatsplay to learn the rules of the game, figuring out a water-tight set of tactics could take months. For a simple game, it really is terrifyingly addictive stuff. The same goes for Anofasoft's Think, a fascinating sliding-tile game re-released by Firebird Silver at a desperately reasonable £1.99. What's particularly striking about both games is the way that, simple though they both are, neither game would be really practical if played on an actual real-life board. The mechanism of colour transfer in Infection or of the movement in Think would be fiendishly difficult to implement outside a computer screen. (Oddly enough, you could say almost exactly the same thing about Reversi: turning over all those tiles is far easier on screen than in real life.)

GETTING PHYSICAL

Indeed, the future of computers as game opponents could well turn on their dual ability to act as playing opponents. Quite simply, you can present games clearly on screen that are difficult or impractical in real life. An obvious example is the point in a chess game where one player has two queens on the board. In real life, players are forced to improvise with upside-down rooks. On screen it's the simplest thing in the world for the computer to create another queen, making the actual position on the board a good deal clearer.

Similarly the Japanese game Shogi looks confusing to Westerners because of the way both 'black' and 'white' sets of pieces are actually the same colour. This is essential in real life: Shogi pieces swap sides on capture so that, for instance, a black Lance may be taken and subsequently returned to the board as a white piece. A computer version of Shogi could colour the sets differently, changing colours automatically when pieces are captured.

Imagine how much more important this 'computer-as- board' factor could be for 3D games. The obvious way to play such games is with a 'stack' of boards mounted one above the other like tiers of a wedding cake. This is difficult enough to handle in real life with a game as small as noughts-and-crosses, but a stack the size you'd need for chess (8 high) or Go (19 high) would be something else again. Even seeing what was going on would be impossible, never mind trying to actually move the pieces. Imaginative 3D display techniques along with cross-sectional views in different planes could make solid chess or draughts games perfectly feasible in computer form, and moving pieces would be simplicity itself.

There's another important thing both Infection and Think have in common: they are enormous fun in a way that no game of chess, draughts or backgammon could be for the average European or American gamesplayer. What's so great is the actual learning process. As understanding gradually dawns you can feel truly clever, knowing that you've hauled your self up from total ignorance to beat that machine on its own terms. If you get the same buzz out of learning chess or draughts, the chances are you can hardly remember it now - with new purpose-written games you get that same thrill of discovery time and again.

This doesn't apply just to think-em-ups either. Many of the games we play nowadays are becoming increasingly complex, difficult to play, and - at the same time - depressingly familiar. It's the same programmer versus player confrontation that you get in chess, but in the long run it's doubtful whether the player can ever win. Shoot-em-ups like Blood Money on the Amiga are both technically impressive and fiendishly difficult - both achievements that stand as testimony to the programmer's art - but the actual scenarios are often little different than a dozen other programs. Challenge this Jam Laser points out on the letter pages this month) is obviously important, so is technical skill, but for the player that sense of discovery and excitement when confronted by the truly original is also essential. If game designers began to put as much effort into new scenarios as they do into technical achievement, we might all be the better for it...

This plucky British programming team crammed the complex game of Chinese Chess into a 48K Spectrum, but to no avail: the PC-based Tairwance program next door stomped all over their brave little effort.

...ese Chess
...next door

THE AMAZING AMIGA . . .

When we heard that men who drive Rovers get more rumpy pumpy, we were intrigued but not too surprised. But when we discovered that Activision's new flight simulator was being programmed by the brilliant Vektor Graphics and the brilliant Phil South straight up to Leeds to see it.

You've seen one flight simulator, you've seen them all, right? Well, no in fact, because not until I was invited up to see a preview of Bomber itself did I believe a computer could fly Activision wanted it, so Vektor did it, because as you may or may not know, Vektor Grafix are one of the country's leading exponents of 3D computer graphics. They had the technology, so why not see what it can REALLY do. And they did 12 months ago the design was finalised, but still certain things needed doing to it. John Lewis, co-director of Vektor Grafix and designer of Bombar talked me through a few things that they wanted from Bomber. For a start they wanted round jets, round cannons and round wheels. Eh?

"Nobody does that, you know, I don't want to see flippin' hexagonal wheels, I'm a simulator fan and I want to see REALISM. None of this jerky movement and small amounts of polygons. I want round wheels, hundreds of polygons per object and smooth lifelike movement." And Bomber has it. The ability to move all around the 'world' that has been mapped

inside the computer was essential. Freedom of movement around your aircraft is also a feature, allowing Bomber to show off all its smooth flying action

"The trick with the design was finding a flight simulator angle that hadn't been done before. All the sims before have either been commercial, Lear jets and Cessnas, or they've been fighters. So I got thinking, the most of the really exciting modern jets are these multi-role combat aircraft. So you take aircraft like the Tornado, the F/L11 and the Saab Viggen, stuff like that, nobody's done simulators of those thought it would be a great idea to concentrate on 'ground attack', but with air defensa capability, which is what bombers are all about. They're all about carrying a great shipload of bombs to a target, bombing it, but then having

the ability to escape at maximum speed. And that's brilliant 'cause you've got the best of both worlds."

All the aircraft in Bomber were chosen with this strategic low-level and air-to-air excitement in mind. The game features the British Tornado, German Tornado, F-4 Phantom, Saab Viggen, F-15 Strike Eagle, F-111, and a first for this program, the Russian MiG 27. This is the only chance you'll get to fly one of these, rather than just blow it out of the sky.

Like all the other aircraft in the game, you can switch planes mid-flight, refuel and run on preset missions, or even design your own for you or your friends to play. Every possible detail has been included, and any bit of any plane that can be animated has been, right down to the variable incidence wings and the

-T 5300

those who can see beyond the obvious there are things that you can do, not moving away from the leisure are a completely, but in serious computing there's an awful lot you can do with a powerful 3D graphics system."

So that's experimental work, but how about gaming? "Wait there's a new idea we're working on, totally away from 3D work. It's more in the line of what you might call 'totally interactive movies' Saying more than that would give too much away, but wait and see. Real soon now. The other

undercarriage. The team has really worked hard to bring you the best simulator ever.

The team around John and Andy producing the game as Cisran Guiltneke (MS-DOS), Ian Martin (C64 and co-ST and Pete Featherstone (co-ST and Amiga), Carl Terry Spencer (280) Derek "Squegely Erek" Austin (shape design and stripy shirt monitor), Mark Griffiths (support graphics) and Carl Logan (environment design) Carl is also working on a special natural language parser for future VC products. By the way, Derek is called "squiggly erek" because that's how he signs his name!

VEKTOR GRAFIX

A couple of years ago, John Lewis was working for another software publisher, and like most people he thought he could do better on his own. But quite unlike other people he actually did go it alone, or rather form a company with friend and programmer Andy Craven which produced its own product.

The move was prompted by the 3D graphics routines that Andy Craven and his friend Danny Gallagher had designed. "These guys came to me and showed me these amazing 3D vector graphics on the 8 bit machines." said John. "Totally blew everything else away, they did. What they'd done was basically the Star Wars game, and so when I heard that Domark had the license I knew we had to get together." And so the Star Wars game was born, and so was the fledgling Vektor Grafix. Andy ran the company while John still worked for this other publisher, but after the success of Star Wars and Empire Strikes Back, John quit his day job to join Vektor Grafix full time.

Since March this year, the firm has re-located into a brand spanking new converted brewery house in the centre of Leeds, and now also has 4 products for Activision in the works, of which Bomber is the first

So what is the future for 3D graphics and Vektor themselves, John? "What I don't want to do is give away what we've got in mind. For

thing is our development system, which we've written in association with our friends and neighbours in 3D, Real Time. It's called SinAsm, it runs on the PC and it's really dead good, and much better than PDS We'll be launching it at the PC Show in September, so come along and have a look."

HERE'S YOUR CHANCE!!

We've got together with Activision and Vektor Grafix to bring you a superb prize competition. Ready? Well, when we were up talking to John Lewis, he mentioned that both he and Andy were taking Flying Lessons. Only in the interests of research, you understand. Don't think there's any FUN in it for them oh no. So that's the deal Answer these admittedly hard questions on military aviation, and you could win £600 worth of free flying

lessons, plus a copy of Bomber for your computer 20 runners up will also get a copy of the game

Okay, here are the questions:
1. When was the first air transportable hydrogen bomb dropped and where?
2. Who first flew across the channel?
3. Which commercial airliner has a droopy nose??

Answers on a postcard before October 31st 1989 to Bomber Competition,

ACE, Priory Court, 30-32 Farringdon Lane London EC1R 3AU No employees of Activision, Vektor Graphics or Emap Business Publications may enter, and the editor's decision is final. Oh yes, and don't forget to mention what format you'd like the game on, okay? The flying lessons will, where possible, be arranged at a venue convenient for the winner, but some travel [at your expense] may be involved.

PIC CURVE POWER

This VGA graduated horizon is just one of the signs of technical innovation in flight simulators. Check out F15 II over the page..

The PIC – Predicted Interest Curve – is the most sophisticated reviewing tool around. Here's why...

The curve is divided into six sections, indicating the player's adrenalin level after one minute, one hour, one day, one week, one month, and one year. But that tells you an awful lot then just what your interest level will be at any given time (although that's obviously important in itself)...

For example, a high one minute rating means that the game must look fantastic and get you all excited from the word go. That means it's probably a good game to show off to the neighbours – after all, they probably aren't going to pay attention for much more than a minute, after which they'll go back to drinking coffee and making rude remarks about those awful hostile games they keep play these days'.

The minute, hour, and day ratings can tell you a lot about a game too. If there's a dip here, followed by a rise, you've got a game that may take a bit of getting into – not recommended if you like to get down to something quick and easy. Alternatively, the graphics may put you off for a while until the gameplay starts to grip. Check out the PIC comment for more details.

Finally, you've got the month and year ratings. The better a game holds up here the more deserving it is of your hard earned cash.

PIC curve construction takes a lot of playing on the part of ACE reviewers. PIC curve analysis is an art in itself. The nearest to knowing just what you're getting when you make the decision to splash out on Mutant Macdonald Gettyburgers... or F15 Strike Eagle II – just one of this month's excellent examples of today's software technology.

PREDICTED INTEREST CURVE

PICs give you more than a rating – they represent the entire life of a game...yes SIR!

DON'T FORGET THE UPDATES!

We don't just review the latest releases. We also check out conversions of old games onto new formats. So there could well be a recent conversion to YOUR machine...This month Updates are on pages 80-81.

THE ACE REVIEWING SYSTEM

PIC CURVES
This unique feature to the ACE reviewing system charts the interest level that a game simulates over a period of time. The curve is accompanied by a comment to explain why it is the shape it is. Find out more in the PIC Curve Power panel on this page.

Each review also carries several Version Boxes that give you details of the game's implementation on a specific machine. These boxes include ratings for:

GRAPHICS
All aspects of the game's graphics with the renditions of each machine taken into account. A good-looking Spectrum game will therefore score higher than an average-looking Amiga one.

AUDIO
The music and sound effects are rated here. A high rating is possible on even limited machines like the Spectrum and PC if the computer's shortcomings are cleverly sidestepped.

IQ FACTOR
Yes, sometimes you have to use your brain. This rating evaluates the risk of mental effort – which some people actually enjoy. Note that ACE testers are generally reluctant to be more intelligent than other human beings, so the ratings may be lower than you expect.

FUN FACTOR
Basically a measure of mindless addictiveness. Games like Arkanoid and Flying Shark require severely zero brain power but are still remarkably addictive. Most con-ops scores well here because they are designed for instant satisfaction. Games don't have to be either fun or intelligent – they can be both.

ACE RATING
The one not yet plucked out of the air but a calculated from the area under the PIC Curve. To get a really high rating a game will not only have to be very addictive but stand the test of time as well. Just because a game does not get over 900 does not mean we are not reason mending it – the following is a general guide to what the rating means.

900+ A classic game recommended without reservation.

800-899 A superb game but perhaps lacking the long-term depth to last into the month and year catagories.

700-799 Still highly recommended, but probably recommended to the gameplay that take the edge off it

600-699 The 'fair' zone, where a tonic to be very good 'if you like that sort of thing

500-599 This still has good things going for it, but the game clearly has some noticeable problems.

400-499 Problems with gameplay and programming make this an inferior game

300-399 Not only is the gameplay bad but the design was probably flawed in the first place.

200-299 Things are getting really serious now.

100-199 2581 games running on an Amiga

under 100 Nothing has achieved this appealing level of rating. If anything ever does, it wouldn't even be worth having it for free

VERSION BOXES
The comms version-specific information on graphics, audio, loading problems etc. If there's no box for your machine but a version is planned, it'll be covered as an update in a later issue

THE TEAM
Jacques Steve Cooke, one of the original editors of this award-winning magazine, known to thousands through his many other preveous stretches, including Zzap! while Wizard, The Pilgrim and Old Baby.

Eugene Lacey is the man who put Britain's top-selling games magazine, C&VG, on the map. Luckily for us, Eugene got fed up with writing for 8-yerk olds and decided the time had come to tackle the challenge of ACE magazine. As one of Britain's most experienced games journalists he won a LAW

Ciaran Brennan should need no introduction. Formerly editor of Zzap! magazine, he's now deputy editor of The Ace and an honorary ACE reviewer

Julian Rignall, formerly UK Don Op champion, former mechanic but a version is planned, it'll be covered as an update. And the man with no name no more Hi-score tables on Brighton

Pier than anyone else. **Mike Pattenden** is the editor of Commodore User – so he ought to know what he's talking about when it comes to C64 stuff. But he knows a thing or two about the Amiga, and is no dummy when it comes to other machines either

Mark Patterson has put in two and a half years of games slavery for Commodore User and C&VG and knows everything there is to know about RPGs.

We don't review anything until we are 100% certain that we've got it right. We've checked them out thoroughly – now you can too.

STRIKE EAGLE II

MICROPOSE spend a night at Sierra Hotel

POSSIBLY one of the most popular "adult" computer pastimes, computer generated flight simulators have come a long way from the early PSION Flight Simulator days, where you could get suitably enthralled by a row of dots in the shape of runway landing lights. In these enlightened days, when computer flight simulations are so advanced the USAF are using them to train pilots you'd have to be clinically insane to want to release another title into a field with such abnormally high standards. Once again Micro-prose have managed not only to beat their previous best title, in this case F-19 Stealth Bomber, but have also come up with a worthy contender to Microsoft's Falcon.

To clear up any confusion, Strike Eagle II is a flight/combat simulator that offers you the chance to fly simulated strike missions through a choice of war zones, ranging from Libya (an easy ride due to their outdated equipment) through the Persian Gulf and Vietnam to Europe (where you can quite easily become a sitting

duck to the most effective defensive equipment there is).

In effect, SE II is an updated version of F-19. Indeed, the areas you fly over are identical to the aforementioned F-19, as are the enemy. The first real difference is that the plane is a lot more fun to fly. First off, you've got a lot more speed to play with, with the added fun of afterburners on board. Also due to its sleeker design, the F-15 is a lot more manoeuvrable than the cumbersome Stealth Bomber, which adds up to much more enjoyable combat. None of this nancy radar evasion for me.

Another thing that has been simplified is the weapons system. Unlike Stealth Bomber, you always carry the same payload of three types of weapon. AIM-120A AMRAAM medium range air-to-air guided missiles, AIM-9M Sidewinder short range air-to-air infra red homing missiles and AGM-65D Maverick air-to-ground attack missiles. Each can be readied for fire at the touch of a button, and selecting a weapon automatically selects the correct radar

setting and enemy tracking mode. All three missiles are 'Fire and forget', meaning all you have to do is 'lock on' the missile to a certain enemy (keep tracking the enemy until it comes into range of the currently selected missile, at which point you are told a 'missile lock' is now effective) and press fire to launch the missile.

In CGA, EGA or Hercules, the game looks the same as F-19, which is no bad thing. Lots of multi-faceted filled vectors and the like, but in VGA or MCGA, thas has to ba the bast looking flight simulator yet. Just the sheer variety of views alone are enough to warrant a high mark, with missile view, three sorts of external view, and the option to see yourself from your enemy's point of view. The best thing about it, however, is the incredible use of colour. If you remember Archipelagos on the Amiga, you'll recall the very clever misting effect on the horizon. SE II has that very same effect, and it is extremely effective. The feeling of depth is incredible. Add to that the brilliant sensation of speed and you've really got something.

Though maybe not as smooth as Velocity's Jetfighter, F-15 is every bit as fast, and you really notice it on low-level flight. Easily the breathtaking effect is the missile view when you've launched something at the ground. The missiles fly much faster than your plane, so the speed in itself is exhilarating, but it's when the missile picks up speed and starts plummeting toward its target ush for a hydraulic chair.

So why pick this over Falcon? In terms of being a flight simulator, Falcon has the edge, but even so, this is ideal for a beginner, as it's very easy to fly and it's a lot of fun. Also, experienced buffs are going to get a lot of fun out of this simply for the large number of missions involved and the variety of scenarios. In terms of accuracy, it may never match up to the mighty Falcon, but I can still see myself putting in more than a few hours on this one yet.

● Tony Dillon

THE ROLL OF HONOUR

Fighter Pilot - Spectrum
One of the many Spectrum flight simulators to appear of that time, the only difference being that this one actually gave you decent combat. The scenery was simple: a few dots, yellow ground, blue sky and the enemy planes were merely triangles, but there was something really involving about that little D.I. battlefield.

Gunship - C64
Exciting helicopter combat action with amazingly fast filled vectors, especially for a C64. Microprose managed to fit in a heck of a lot onto one little 5 1/4" disk - five areas to fly through, an infinite amount of randomly generated missions, three different skill levels, dozens of different enemies and the ability to build a chance to, complete with medals and promotions, all awarded with a suitable full colour still picture. Still one of the best.

Falcon Mission Disk - ST/Amiga
The cream of the crop so far. After holding the seemingly ultimate flight simulator, Microsoft came up with not only a new battle laid for you to fly over, but a whole was to fight single handedly controlling no less than three lines of defence while thwarting the oncoming invasion. Pretty heavy stuff, and all played out with some of the tastest filled vectors yet.

TECHNO PORN!

OK, so just how fast is the beast? Well, you can check the frame rate for whatever machine you are running on as follows. Hit the ALT and F keys, which will print the number of Jiffies per 4 frames on the HUD. Take this number and divide it by the Hz rate of your graphics card: 60 Hz for EGA and CGA, 50 Hz for Hercules Mono, and 70 Hz for MCGA. This gives you seconds per frame. Invert it and you will get frames per second for your machine configuration. Nifty eh?

The memory taken varies from machine to machine. On a Tandy it takes 384K of memory while on an MCGA machine it takes 512k.

The program took approximately 1.5 man years to develop with many people working on it. Andy Hollis was the main programmer with Sid Meier. Bruce Shelley with Max Remington designed the 3d objects while Bruce alone designed the worlds. Mike Haire did most of the normal art with Murray Taylor assisting. Alan Roireau along with Chris Taormino and Russ Cooney helped develop game play end of course did the normal testing. Jeff Briggs wrote the manual.

The MCGA/VGA graduated horizon by distance was designed and implemented by Andy Hollis and the Director mode was designed and implemented by Sid Meier.

■ Tony Dillon

ACTION SEQUENCE

You've spotted the enemy! Name is on him!

That's it, you've got a lock!

As Wild Bill Stealey himself would put it, missiles away!

RICK DANGEROUS

FIREBIRD breath new life into platform capers

STRANGE name for a super hero – Richard Dangerous – so Firebird have shortened it to 'Rick' to give it more Hollywood-style credibility. Just in case you're not impressed, he also sports a brown brimmed hat and unshaven chin, looking for all the world like Indiana Jones.

Your mission is also an Indystyle adventure. A colourful eight page comic included in the box sets the scenario in which, after surveying a bomb attempt on a restaurant where he's supposed to meet Jose to collect a map, our hero enters a car chase through the town in suitably Indy-style 1930's cars. Not follows a round of fisticuffs in a plane, after which Indy (sorry, Richard. Rick, that is) parachutes out and lands in dense jungle. After a skirmish with some 'Baddie' natives, the final panel of this gripping comic shows Rick entering a Temple pursued by a great ball of rock. On this somewhat familiar note the comic ends and the game begins.

There are four separate levels – this may not sound like much but the degree of platform precision and puzzle solving required to beat each one means Rick's quest is no pushover.

There's no puzzling to be had in the first few screens, however. It's just a question of legging it until you can escape that boulder. After dying several times you will notice that Rick can move right or left as he falls. This is useful not just for dodging the boulders but also for avoiding the spikes that are placed on the bottom of certain caves as man traps.

Rick is armed with a gun, several sticks of dynamite, and a bag stick which you should use in true colonial tradition to poke the hostile natives in the gut and kill them.

The use of the bombs and gun is graphically cute – and cartoonlike. Its slightly reminiscent of the classic computer game Spy Vs Spy, in which you could place traps for your opponents. Rick Dangerous has a similar feature with his dynamite. He can light a stick beside an object to clear his path, but he has to leg it away from it first or he may blow himself up into the bargain. Using his various gadgets imports a sort of remote control feel to the use of the joystick. Time factors are crucial- you must remember to press the fire button before you move in the direction of a nasty to let fly with a bullet.

Dynamite and bullets are limited but Rick must make sure he collects every single cache of these arms as he explores the platforms. Of particular merit in Rick Dangerous are the puzzles. They amount to much more than simply working out a route and then leaping with pixel perfect precision to get to your destina-

Ricks setting up...

tion. In Rick Dangerous you have to use the dynamite or your gun strategically to hit the action in your favour. This provides a little exercise for your brain as well as your reflexes.

As well as the Temple there is a Pyramid scene, German Army base (more shades of Indy) and the Missile Silo level at the end of the game. Your final objective is shrouded in secrecy throughout the game and revealed in a graphical sequence at the end, which it would be churlish to reveal. Your immediate objectives on each level are simply to survive and blast your way through to the next, solving the tactical problems and blasting the opposition en route.

Mr Alan Hughes of Milton Keynes should be particularly pleased with Rick Dangerous. He wrote to ACE last month complaining that there was not enough fun in the latest games. Pure arcade fun is here in abundance, Mr Hughes

and although some of the levels are pretty sparse graphically and there are occasional lapses in pace, what there is is of a very high standard. From an appallingly unoriginal scenario Firebird have hewn a splendid platform puzzler.

Eugene Lacey

RELEASE BOX

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AMIGA VERSION

Splendid sound FX and Music – and particularly well matched and synchronised with the game play. Again full marks to the Amiga programmers for the speed with which a new game starts after Rick dies. Three quick presses of the fire button and you are ready to begin again. Is that response at least, all games should be like this.

GRAPHICS	16	FACTOR 7
AUDIO	8	FUN FACTOR 8

ACE RATING 890

THE SUN'S BEATING DOWN,
ROCK 'N' ROLL MUSIC'S PLAYING . . .

Beach Volley

See us at the
PC SHOW
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**It's time for Beach Volley –
let's take on the world!**
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Sydney challenging all comers in the latest craze
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STRIDER

USG take it in their stride

WHEN it was released in the arcades at the start of the year *Strider* became an almost instant contender for coin-op of the year. Slick graphics, a thumping soundtrack and lots of features soon gave the game the success it warranted – and US Gold grabbed the licence.

At first glance a run of the mill left-to-right scroller, *Strider* contains many original ideas, tricks, hazards and nasties that come as a complete suprise to the player, the Politburo that transforms into a giant snake, giant robot gorillas, and super-human Muscovite's, each requires a particular tactic to overcome. All have one thing in common, they take a lot of damage before blowing. The best tactic is to find an area on the screen where they can't hit you, then work your way slowly to them – remembering, however, that there's a time limit.

Strider, the main character produces the most amazing array of twists and turns in accordance with the joystick movements and type of terrain. *Strider* sends him on a slide, diagonal and up causes a somersault, and he can hang off walls and ceilings with the aid of a hook.

Set in Russia fifty years in the future, the majority of the game is based around the player using *Strider's* abilities to progress through levels by avoiding hazards, traversing mountains, Russian guards and platforms.

Armed with an energy beam which he swings round his head, *Strider* can inflict severe damage on all of his enemies. Little satellites can be collected which orbit the player, destroying everything they touch and adding their own firepower to yours.

All of this looked pretty uncomfortable, but *Tertex*, the people behind Indiana Jones, were

Guy the gorilla's two ton twin. Avoid his steel girdered fist at all costs.

given the task, and they've done us proud.

After cutting through several waves of Russian troops and their robots, scaling buildings and leaping traps, the first end-of-level nasty is reached, a largish man, rippling with muscles and kitted out on performing the Kirov ballet on your face (you're attacked by real ballet dancers later on in the game). When he has been destroyed the screen is reduced to flames from the top down, wiping out almost everything in the way.

Next comes the interior of the Kremlin. Unfortunately the Politburo don't take kindly to unwelcome visitors. Seconds later we've transformed into a giant snake desperate to kill you. Once the result of that confrontation has been decided it's off to Siberia.

The graphics have been faithfully reproduced with good detail and use of colour. The

Enter the Politburo dragon.

PREDICTED INTEREST CURVE

Incredible addictiveness brought on by the immense variety in levels. Though once completed you might not feel the need to go back

background graphics are exceptional and although a few backdrops appear to be missing this doesn't affect the feel of the game at all. The main sprite is perfectly drawn, although speed and a few flurries of animation had to be sacrificed owing to computer limitations.

One thing that has been changed is the level of difficulty. Your foes don't take as many hits as before, pegging out and some of the jumps have been shortened, reducing the pixel-precise timing of the arcade game.

Complete with funky soundtrack and good sound effects, this is an exceptional conversion of an exceptional game. Packed with levels, features, and just about everything else you could ask for, *Strider* must surely rank as one of the greatest arcade conversions ever.

● Mark Paterson

XENON II

IMAGEWORKS' super-smooth scroller

DO you groan with boredom when you hear about yet another vertically scrolling shoot-em-up competing for your hard-earned, or hard-begged, cash! Well if you do, stop it – because Xenon II almost lives up to the hype, which makes it a very impressive game indeed.

If you really need an excuse to have a good old-fashioned shoot-em-up, you'll be worried to hear that the Xenites are up to their old nefarious tricks – you probably thought you'd finished them off in the first Xenon game, didn't you! This time they've gone and planted five Time Bombs in different periods of history corresponding to each of Xenon II's five levels. It seems that the very fabric of time as we know it is at threat and only you can save the day (week, month, year, eon and so on...)

So you strap yourself into your Megablaster and off you jolly well go. The ship is a potentially very sophisticated little thing, but starts off with only a thruster, a blaster and a shield, you've got to earn your extras on the way. Each of the game's five levels represents a period of of history, and logically enough you begin in some sort of stone age, flying over the rocky structures hanging in space. Masses

And there's Crispin himself, ready to sell you any weapon you want – so long as you've got the dosh.

of beautifully designed alien nasties come swarming down at you and you fill 'em full of lead.

As each critter is wasted it turns into a floating bubble that means cash for you. It's in your interests to be as greedy as possible and collect as many bubbles as you can, since cash can be turned into a sumptuous variety of extra weapons at your twice-per-level stops at Crispin's swap shop (more of this later).

Tokens also appear, giving you extra firepower in your moments of greatest need.

At the end of each of the five levels there is that old friend, the end-of-level Guardian, to conjure with. These creatures are extremely well-designed, extremely mighty, and extremely hard to kill, each one has to be dealt

The giant alien is zapped leaving a cloud of energy giving bubbles in its wake.

with in a different manner, and discovering the right one will cost you many a life.

If you've spent wisely in the weapons shop,

The ship is now fully equipped – and awesome in its fire power. Note the debt to R-Type with the worm appearing from the monster's intestines.

You could be in trouble here, but then you are throughout the game...

of course, you'll have a better chance of success. Some of the extras you can purchase are fairly standard, such as cannon and laser. Others, however, show much more flair – check out the following drone for instance, it's hard to see quite what it does, but it certainly looks pretty bobbing around behind you Super Nashwan Power will give you 10 seconds of really satisfying total destruction Get yourself enough cash, or collect enough tokens, and you could find yourself blasting around with three or four extras trailing behind you.

RELEASE BOX

ATARI ST	£24.99dk	OUT NOW
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ST VERSION

One of the prettiest games you're likely to see on the ST this year, and certainly one of the more addictive. It's one of those games that really do approach arcade quality, and the sample sound track will take some beating too. Very classy

| GRAPHICS | 9 | IQ FACTOR | 4 |
| AUDIO | 9 | FUN FACTOR | 9 |

ACE RATING 905

AMIGA VERSION

By far the best version. The Bomb the Base soundtrack that accompanies Xenon II is superb. You can hear every last scratch, snip, and shriek as the sound chip works overtime. Graphics are colourful, smooth and fast, in every department Xenon II stretches the Amiga further than any shoot 'em up has ever stretched it before

| GRAPHICS | 9 | IQ FACTOR | 4 |
| AUDIO | 9 | FUN FACTOR | 9 |

ACE RATING 910

PREDICTED INTEREST CURVE

Instant fun and addiction, and tough enough to keep you going for a good long time.

If all this sounds like familiar stuff – well, it is. There are elements of just about every shoot-em-up you've ever played in Xenon II, from Space Invaders through to R-Type But, surprisingly enough, this derivative streak doesn't matter; The Bitmap Brothers have put the bits and pieces together in such a professional and stylish way that you'll just want to grasp your stick and join battle.
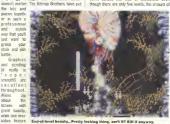
Graphics and scrolling (it really is 's m o o t h smooth') are e x c e l l e n t throughout. Aliens zip about the screen with great suavity, while on innovative feature is the ability to move backwards off the screen, giving you in effect a greater playing area as well as the chance of another crack at creatures you haven't managed to blast

As an extra there is also a sound track

sampled from Bomb the Bass's 13th Precinct Hip Hop, which sounds pretty damn good. All in all, Xenon II - Megablast is one of the most accomplished shoot-emups you're likely to come across this side of Christmas. Even though there are only five levels, the amount of

End-of-level beauty...Pretty looking thing, ain't it? Kill it anyway.

detail and action in there makes it a stiff challenge. You'd be doing yourself a disservice if you don't at least give it a play test.

● Pete Connor

BITMAPS DEPARTURE

The Bitmap's are keen to do something different in their next release

Although Xenon lans might like to see the game

run and run like a software Police Academy the Bitmaps want to do something new "to keep the interest for ourselves' The new

game will still be an arcade style game as this is where the Bitmap's believe their best design skills lie.

'If we do another shoot 'em up it will have to be c o m p l e t e l y unlike anything that has been done before.' The leading design team would love to do a game for the PC Engine – though this is not on the cards at the moment. We are interested in the hand helds and the sixteen bit consoles but it is a business matter as to who gets the develop
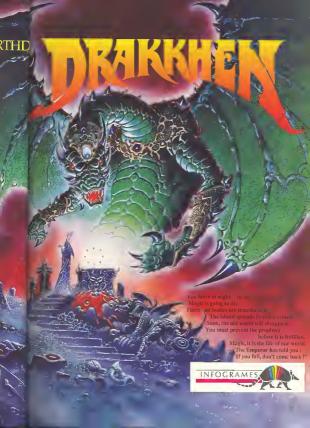
ment systems – and who gets to do games for the machines' Eric Bitmap told ACE

ANHAK DRAKKHEN AGHNAHIR HURTHI

RTHD

DRAKKHEN

You leave at night. he su...
Magic is going to die.
Faces and bodies are transform...
The island spreads its evil around.
Soon, the old world will disappear.
You must prevent the prophecy
before it is fulfilled.
Magic, it is the life of our world.
The Emperor has told you :
If you fail, don't come back !"

INFOGRAMES

TANK ATTACK

Blitzkrieg CDS Style

TRADITIONALLY war games were table top board games with model landscapes and troops. All calculations were performed with pen, paper and dice. CDS have taken the original theme one step further and brought in a computer to replace pen and pad.

The game is centred around four fictional countries, Armana, Calderon, Kazados and Sarapan. None have any real tactical advantage, other than personal taste. However the game does require a minimum of two human players as the computer doesn't control any country – so make sure you bring a friend.

The board is divided into four provinces each governed by a separate state. Each province features various kinds of scenery such as forests and villages. Some of the landscape is impassable by any vehicle, or hikes your movement rate. Right in the corner of the provinces is the military HQ. This is the main game target for the opposition – when they arrive here it's game over for whoever lives there. The whole map is overlaid with an hexagonal grid, each clear and representing one movement space.

First thing is setting up the board. Each player picks a team of eight tanks and armoured cars, the strongest being a Main Battle tank ranging through light tanks right down to Light Armoured Cars the weakest units. If there are three players two are allied against the third player who in turn gets double the units. Between each of the countries is a demilitarised zone where no units can placed until the game starts, otherwise you would be able to start combat right from turn one. In each quadrant.

All calculations are now handled by the computer. The first screen it shows is the news screen. Set in the style of a newspaper, one section describes the current situation of the war, another the weather and how it will affect unit movement. This is not a particularly vital screen but it helps to break the routine of the game. Then come the individual player turns. The computer will assign your side a number of movement points which correspond to the hexagonal grid on the board. Each unit can move any number of hexes up to the allocated number of movement points (subject to terrain restrictions).

Then comes the fire sequence. A unit can attack or be attacked when it is within four

The board element.

spaces of an opposing army unit. This again is handled by the computer. It requires the inputting of the distance between units (1-4 hexes) and the types of unit facing each other. A graphical representation of the battle is then displayed with the outcome being a mixture of destroyed, damaged or intact between the two units. So it isn't always safe to attack.

Finally if you do manage to reach the enemy HQ in one piece you get to select the destroy HQ icon (actually it can be activated at any time during the game, but that's cheating) and blow them away, thus winning the game.

Tank Attack is an original concept as far as other software houses go, though not as good as Brian Clough's Football Fortunes CDS's previous computer board game crossover. It does lack most of the in depth elements and movements which grace the tables of wargamers through the straightforward run and blast tactics used. So if it's just a fun, simple strategy game you're after give this a look in.

● Mark Patterson

AMIGA VERSION

The main screen graphics are produced in a cartoon style which gives the game a slightly more light hearted idea. The software itself is nothing outstanding, if anything gives the impression of speed by hand characters but when put along side the board aspect makes for a fun multi-player game.

GRAPHICS	7	IQ FACTOR	7
AUDIO	7	FUN FACTOR	7

ACE RATING 782

PREDICTED INTEREST CURVE

Thanks to the multi-player feature Tank Attack gains more lasting attraction than it really deserves. Though the novelty will wear off in the long term.

A typical battle in scenic surroundings.

FAST BREAK
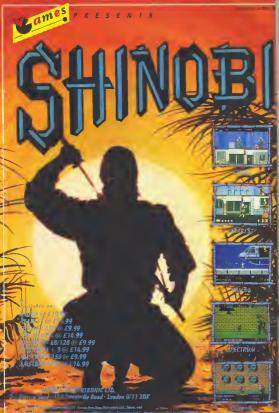
ACCOLADE'S slam-dunk simulator

REPUTEDLY one of the greatest makers since the invention of the basketball itself, the Slammers and the Jammers are at it again. This time it's two teams of six taking part in a three-on-three contest.

You compete with a friend or a computer opponent, and before the match starts a few tactical decisions have to be made: the length of the quarters (3 to 12 minutes) and exactly which members of the squad are going to play. A quick resume of each player's strengths and weaknesses helps you decide.

The court is viewed as two awkward flick screen halves. As a result any action in the centre of the court inevitably becomes confused. Ball moves include dribbling, passing, shooting and opportunities for calling offensive and defensive plays. There are two kinds of personal foul and no free throws. Unusually you don't automatically control the player nearest the ball, switching between players manually tends to slow the action down.

Anyone keen on extra tactical play can pick one of 14 pre-designed offensive plays or create one of their own using the Playmaker.

On paper it all sounds pretty sophisticated. On court, it's a disappointment. The sprites are poorly defined and jerkily animated, play's

spoilt by the flick-screen action and there isn't that much skill required. It only takes a couple of minutes to get used to the shooting controls and after that almost every basket you attempt goes in.

If you've always dreamed of luring yourself up the court in a pair of Lycra shorts, dribble driving, no-look passing and slam-dunking your way into basketball history, keep on dreaming. Accolade has built up a reputation for producing top class sports sims. This ain't one of them.

● Rob Hanna

SLAMMERS...

You make your own selection so there's no excuse for putting old butterfingers in the team.

PREDICTED INTEREST CURVE

Curiosity dwindles to boredom as the absence of any real challenge becomes increasingly clear.

RELEASE BOX		
AMIGA	£24.95dk	OUT NOW
C64/128	£9.95ss • £14.95dk	IMMINENT

AMIGA VERSION

Flat looking sprites, badly drawn graphics and very limited sound effects aren't much of a showcase for the Amiga's potential. Coupled with unchallenging gameplay, they amount to a pretty mediocre package.

GRAPHICS	3	IQ FACTOR	3
AUDIO	2	FUN FACTOR	4

ACE RATING 492

A record of all your secret transactions is kept in a drawer in your desk. Keep hoping the opposition doesn't find out.

wells without destroying them. The telephone rings periodically to let you know of any new developments and offers of supply contracts; it takes a shrewd mind to work out when to accept one

Oil might not sound like the stuff that the best strategy games are made of but with so much variety to the action there's little danger of anyone but the most hardened arcadesters getting bored There are plenty of detailed touches (you can even pick the decor of your office), the arcade sequences fit in perfectly and no two games ever turn out exactly the same Rainbow Arts, who don't exactly have a fantastic track record in this sort of field, have a taken a very unusual subject, lavished lots of time and attention on it and come up with an extremely slick, absorbing and original game

RELINE strike black gold

REAL men don't eat quiche – they work in the oil business That doesn't mean endless kowotling with Sue Ellen, alas, instead, it involves coping with fluctuating oil prices, delivery contracts, sabotage, fire-fighting procedures, keeping an eye on your balance sheet and still staying on top of the competition at the end of the month

Oil Imperium works rather like a very sophisticated version of Monopoly. Four players (human or computer) take consecutive turns, each turn lasts for one calendar month and involves as much wheeler-dealing as you want to cram in. It's not a sociable game. As some actions need to be kept secret, human opponents have to keep away from the monitor while you're playing. Competing solo causes fewer arguments

You work to one of four objectives (ranging from richest player after three years trading to acquiring more than 80% of the market share) from the comfort of your office, clicking on a selection of icons to perform different tasks

Your next job is to commission expert studies on the viability of different oilfields in eight different regions. Once you've picked one which looks profitable, you can start drilling, buying storage tanks and, eventually, selling your oil. You can consult your balance sheet or the newspaper for the latest oil info at any time.

For budding JRs, there's the option to contract agents to damage an opponent's oil wells, rob a competitor's bank, blackmail oil-purchasing agents or blow up oil tanks. Alternatively, you might want to launch an investigation into any strikes against your own fields. If you're successful, you get compensation in the form of oilfields.

Sabotage, telephone messages, and arcade sequences inject the action with extra unpredictability. The success of drilling, firefighting and pipelaying depends on your arcade skills. Three mini-sequences involve you centering and determining the force of your drill, connecting sections of pipe in competition with an opponent, and dynamiting ignited oil-

Oil Imperium is full of neat touches like this – just press the power button to exit the screen.

Don't bother getting a contractor to do the drilling. DIY is cheaper and usually more successful.

RELEASE BOX

ATARI ST	£19.99dk	IMMINENT
AMIGA	£19.99dk	OUT NOW
IBM PC	£24.99dk	IMMINENT

AMIGA VERSION

Slick graphics, user-friendly controls and pleasant soundtrack combine with a helpful, if slightly oddly translated, manual to make this extremely enjoyable to play There's even a nice poster thrown in.

GRAPHICS	7		IQ FACTOR	9
AUDIO	7		FUN FACTOR	9

ACE RATING 835

PREDICTED INTEREST CURVE

Initial persistence is rewarded by long term enjoyment of an involved and complicated game.

CASTLE WARRIOR

A French Revolution as DELPHINE storm Zandor's Castle.

Xamiel
Money: 5,000,000

Edred battling through Level One.

THE conventional Brit view of Gallic games is about as narrow as the conventional Brit view of most things beyond our shores. French games are pretty, graphically 'nice', but when it comes to game play, well... what what?

Purple Saturn Day was superb graphically and gameplay wise, as was KULT, Captain Blood, and the Amiga version of Operation Wolf to name but three.

So when you hear that one of our best known companies – famed for their game play – and none other than Palace Software are linking up with Pant-based Delphine software to launch Castle Warrior you have the right to expect great things of such an entente cordiale.

The game opens in graphically superb style. You are the warrior Edred the Brave who, in a six level challenge, must win a potion from the evil Wizard Zandor, who has poisoned the king – only the potion will save him. Naturally, like all computer game wizards Zandor has demons and monsters aplenty in his employ and you will have to slay a goodly number of these to complete the task.

Edred progresses down the scrolling corridor with a loud clunking of feet. The nasties are clawing at him from the walls and edge slowly towards him from the depths of the seemingly endless corridor. Edred's sword is manipulated by a combination of pressing the joystick button down and moving the arm of the stick through its eight positions. When you successfully strike one of the flying bats or a claw they disappear in a puff of grey smoke.

Edred doesn't have to kill all of the nasties, though it's more fun if he does and wins him extra points. The gameplay here is slightly flawed in that Edred does not always recover quickly enough from swinging his sword to make another parry or swipe. A bit frustrating this, as just when you think you're warmed up and gleefully trashing the flying bats, you die – quite unnecessarily and through no lack of skill on your part.

A couple of large, fireball-spitting nasties have to be taken out in level one if you are to proceed to the next level. This is achieved by swinging the sword at the fireballs and sending them back at the monster. Again, gameplay here could have been better. The sword needs to have a sort of cricket bat feel to it for this to work effectively, which it doesn't. It appears an arbitrary choice which fireballs are returned and which aren't – and in any event it only needs two to kill them, which seems far too easy.

There is a welcome change of weapon in level two. You are armed with a spear which you must lob at the giant dragon who is guarding the entry to the level three (The Subterranean River). This is where the leaping left and right comes into its own. This section is well animated – Edred really looks as if he is leaping for his life. The Subterranean River is similar to the rapids level in Dragons Lair though not quite as breath taking. Edred has a shield in this level to protect himself from the Stalactites, boulders, and serpents that rise up from the swirling water to snap at Edred's tiny canoe. This is a tough and enjoyable level – though most people would prefer to be armed with something a bit more deadly than a shield.

Level Four brings you close to the end of the challenge – and reveals shades of Space Harrier as the highly eclectic nature of this arcade challenge becomes apparent. Edred flies through the skies atop a flying dragon shooting out fireballs at Zandor's most feared beast – the giant dragon Jibba. If he bests this one he faces the final challenge with Zandor in the penultimate level. Dodge the spells cast by the evil Wizard as he sits on his floating throne and grab the potion. Now fly back in glory to cure the King's poison.

Sounds easy – but it will take quite a few sessions to beat this little number. Castle Warrior is a most cornucopia concoction. It achieves high levels of graphics, animation, and sound but is aimed squarely at the gamer who wants to test his reflexes alone – leaving his intellect for other pursuits or slightly more cerebral software.

● Eugene Lacey

RELEASE BOX

| ATARI ST | £19.99dk | IMMINENT |
| AMIGA | £24.99dk | OUT NOW |

PREDICTED INTEREST CURVE

Fun while it lasts - but once you have rescued the king from a nasty dose of Wizard-induced Salmonella it's unlikely to ever spin in your disk drive again.

EYE
OF HORUS

LOGOTRON'S Set point in ancient Egypt.

DENTON Designs have dipped into the rich pool of Egyptian mythology for this arcade-adventure-cum-shoot'em'up for Logotron. Hero of the tale is Horus – an ancient Egyptian deity who is generally represented as half man, half hawk. Set is Horus's uncle and the brother of the good King Osiris. Consumed with jealousy, Set kills the king and later dismembers his body and scatters the seven pieces of the corpse throughout an ancient tomb.

This is where the game takes up the story. Cast as Horus, you must find the seven pieces of papa and reassemble him to rid the world of your wicked uncle. Once the body is reassembled the gods will give you extra powers and you can set out to vanquish Set. Your hawkish nature manifests itself as an ability to change from human to hawk at the touch of a button

The first thing that strikes you is the effec-

Seven amulets can be carried with Horus as he travels - from a possible thirty.

tiveness of the scene-setting. A definite flavour of ancient Egypt comes through in the sounds and graphics of the various rooms of the tomb. The next positive thing about the game is the

Amulets are based on the real thing so discovered in the British Museum. Denton Designs are back with a bang with a 'shoot 'em up adventure' of rare quality.

on-screen mapping that unfolds as you explore. Purists (and the editor of the ACE TM? pages) may complain that it spoils the fun, but we reckon it makes the game immediately more satisfying without losing any of the challenge. As game-styles develop, it's about time we had a bit more development of the user interface, and on-screen mapping is a start, at least. Why should you have to turn to paper, pens, and compasses in the computer age?

To use the map, however, you have to first find the right amulet. This is not easy as there are about thirty different ones scattered throughout the rooms of the chambers - many of them are hidden by Set to make your task more difficult. Each amulet offers a different power and you will have to learn and master all of them if you are to complete the quest.

The instructions tell you about some of the amulets but many are left unexplained for your own experimentation in true arcade-adventure fashion. Horus can only carry seven objects at a time – so it is important to work out your own hierarchy of amulets. The map is of course essential and extra weapons are also extremely useful. The Frog amulet gives Horus a new life.

The best amulets to look at, however, are those that summon the other God's. The Heart amulet summons the good Isis – wife of the King and Horus' mother. She appears in a shimmer and then takes away any piece of the body of Osiris that you may have collected so far to the Burial Chamber. You have to summon Isis each time you recover a piece of body as you can only hold one at a time pending its reassembly. Nice touch this – really makes you feel as if the gods are watching over you.

Another god who can be made to come down from the heavens is Anubis – the god of the dead. Anubis will help you in the final conflict with Set.

Don't get the impression that this is just another arcade-adventure, however. What really spices up the action are the strong elements of shoot'em'up throughout the game. Horus is armed with

Isis appears to take a part of Osiris's body off to the Burial Chamber.

The map is drawn for you as you travel. Why don't all arcade adventures do this?

Papyrus darts that he spits from his beak at Set's nasties – other amulets that Set has brought to life and which swirl around the chamber, sapping your energy each time you bump into one

True to current shoot-em-up philosophy, there are certain power-ups that can multiply the rate of fire by up to four times There is even an R/Typeike satellite. In this case a baby hawk that flies alongside Horus, spiting darts at the opposition Another amulet will give you a constant arc of fire – which is more of less essential in some of the tougher cham-

bers There are also 'smart bomb amulets – but as is the nature of these weapons they can only be used sparingly.

Linking the chambers is a network of lifts. Horus must fly to the ground and turn back into a man to use the lifts. He may also need one of the keys dotted around the chambers to operate them These lifts seem to be the one design fault in the game – and not just because they've unreservedly and would look more at home in a trendy department store than ancient Egypt More importantly, they slow

down game-play It is very easy to inadvertently send Horus up or down on a lift when you really meant him to take off, in Hawk mode What makes this worse is that while the lift is working the computer is drawing the next chamber – so it can take quite a few seconds to get there, and then you have to get all the way back...

On the whole, however, Eye benefits from design discipline The programmers stick to their chosen Egyptian theme throughout (apart from those lifts), resisting the temptation to throw in an alien here and there just because there is enough memory left, and just because that is the wacky, avant-garde kind of grays they are.

Perhaps most important of all, the balance of puzzling and arcade play is great right in Eye of Horus There is no set way of completing the quest avoiding the tedious repetition of finding objects and using them to get to that part of the game that still remains to be solved.

For all its polish, though, Eye of Horus breaks no new ground. It is reminiscent of the old Ultimate Play the Game titles too the Spectrum and 64. But those were great games and the comparison has to be almost as flattering as it is critical. What Eye does do for the first time is bring well-thought-out, excellently programmed carefully designed arcade-adventure to the 16bit machines – and with a spot of blasting to boot There seems no reason why Logotron shouldn't launch a whole range of these – just as Ultimate did.

Eugene Lacey

RELEASE BOX

ATARI ST	£24 99dk	OUT NOW
AMIGA	£24 99dk	IMMINENT
C64/128	£9 99cs • £14 99dk	OCTOBER
IBM PC	£23 99dk	IMMINENT

ST VERSION

Eye of Horus scrolls smoothly in four directions. Full marks to Logotron for providing sound FX and music simultaneously It's no nice not to have chosen one or the other The Egyptian style music adds to the atmosphere of a game that makes good use of the ST's sound and graphics potential

GRAPHICS	8	IQ FACTOR 8
AUDIO	7	FUN FACTOR 7

ACE RATING 885

PREDICTED INTEREST CURVE

An engaging game that grows as you play – plus a shoot-em-up element that will maintain some interest even after you've cracked it.

Face to face with the serpent Set. You will need all of your power-ups to see this one off. Kill him and you've won the game.

DENTON REVIVAL

Game development houses are like magazines They are 'in one minute and out the next The current fashion leaders are The Bitmap Brothers (Xenon I,II and Speedball), Argonaut (Star

glider I,II, and Aterburner), and Graftgold (Uridium, Flying Shark, and Rainbow Islands). Denton Designs used to be favour of the month with games like Shadowfire, Frankie Goes

to Hollywood, and Glft From the Gods amongst their many hits Eye of Horus should rocket them back back to the top of the popularity charts

BLOODWYCH

Image Works introduce two player role playing

DUNGEON MASTER
is the game that marked the rebirth of Mirrorsoft. It ended a lacklustre period for the Maxwell owned games house that saw few releases of any merit. Since Dungeon Master they haven't looked back with a string of hits including Falcon, Speedball, Oids and TV Sports Football, Bloodwych may be the firm's boldest step since the rebirth began. A game in the style of Dungeon Master from the same company has to be at least as good as its predecessor.

Bloodwych's split screen display for two player RPGing. The heart of the game.

The game spec promises a great deal more than Dungeon Master. Simultaneous two player fantasy role playing is possible for the first time. You can play as a team against the computer or against each other in a race to complete the quest. Each player chooses one of sixteen wizards, adventurers, warriors and thieves to join them in the quest.

The objective of Bloodwych is to destroy the evil Zendick by finding four crystals and taking them to the tower to destroy them. The quest begins in the land of Treehadwyl where you must first find neutral champions and collect the items you will need to complete the quest.

Icons control everything including battle, interaction and movement.

Just as in Dungeon Master moves are implemented by selecting and using icons. There are several of these so it is essential to read the manual thoroughly and master the use of the icons before setting out to complete the game. You have to be prepared to invest a bit of time and effort before you will start to derive role playing satisfaction from Bloodwych.

Many strange characters and artifacts are encountered in the quest like the mossies that certain characters can use by clicking on the runes in the spell book. A range of spells are available for the heroes to use.

Manipulation of the characters that you encounter in your travels is the key to success in Bloodwych. It is essential to glean as much as you can from them using the 'trade, bribe, threaten, insult and bribe'. The questioning part of Bloodwych seems to work well. There is a convincing feeling of interacting with the other characters in the game.

When you are happy with your team you can then set out to solve the quest, i.e. give Zendick a good seeing to. Certain characters can be placed at strategic points using the 'Wait' icon. To know what is and what is not a

strategic point a map is essential. The cavernous dungeon corridors of Bloodwych all look very similar and it is easy to wander aimlessly around in circles. 'View' lets you flip between characters – bringing good warriors to the forefront when you encounter one or Zendick's ghosts in some dark forsaken dungeon, or bringing a wizard into the action when a spell is required.

Bloodwych has all of the depth, health and status ratings on characters, icons galore, and detailed graphics that players have come to expect in quality RPG's since Dungeon Master. There have indeed been quite a few attempts to out Dungeon Master Dungeon Master. Most of these attempts have been embarrassing failures. Bloodwych comes closest of all.

It is at its best in two player mode. You and your chum against the world just as things were in Gauntlet – but this time in a fully blown role playing game. Not quite in the Dungeon Master class but an absorbing and challenging game in its own right with plenty of its own original ideas.

● Eugene Lacey

ST VERSION
The ST's tones display comes into its own in the display of some of the small but highly detailed icons. Graphics are colourful and the animation works crisply. Sound FX add to the eeriness of the dungeons and battle scenes.

GRAPHICS	8	IQ FACTOR	9
AUDIO	7	FUN FACTOR	7

ACE RATING 819

PREDICTED INTEREST CURVE

The Bloodwych as drawn by cult D&D artist Chris Achilleos. His first computer original.

Bloodwych provides lasting solid play. A good few months worth – and then gains a new lease of life as a two player game.

SHUFFLEPUCK CAFE

DOMARK/BRODERBUND pucker up...

Looks pretty; plays..hmmm.

THERE are some games that promise much more than they actually deliver. Broderbund's latest offers a sports simulation of sorts, a bizarre set of opponents, good sound, excellent graphics and plenty of variable options yet manages to be less than the sum total of its parts.

The game is Shufflepuck, which is basically air hockey played without goals. Instead each player has a glass plate between him and the table to defend. Should he or she miss the puck the glass is shattered and a point is lost.

The simplicity of the game is spiced up with a neat scenario which transports it into a sci-fi setting. Played in a cafe somewhere at the furthest reaches of the galaxy, it's a cross between the crazy bar in Star Wars and Milliways, the restaurant at the end of the universe in Hitchhiker's Guide.

All regulars are a pretty mixed bunch, united only by their love of shufflepuck.

Wandering into this dive in search of a telephone you find yourself locked in a tournament with eight of the shufflepuck cronies that frequent the bar. The game starts with an animated dial of the locals and you can get into a match by clicking on one of the various pop-ugly faces. Once into a match you can select attacking or defensive modes for the pad-dle. This involves giving you more bounce from the puck or power in striking. To add extra interest to the game you can also select a stockvar which allows you to insert an obstacle between you and the opponent.

The set up over, you can start to take on some of the weirdos. Each has a particular character and skill level. At one end there's the bespectacled weep Skip Feeney who bears more than a passing resemblance to Woody Allen and is a total pushover, and at the other there's Biff Raunch, a nerd's angel with a late temper. In between there's an array of opponents including a lounge lizard (yes literally) with a taste for blue

champagne, and Princess Bejo who has a neat mental approach to the game – she doesn't hit the puck when she serves, she waves her hand over it

In fact much of the variation in the game comes from the characters you find sitting at the other end of the table. Their reactions to winning, losing and lotting in goals add a great deal to the game. Shufflepuck itself is pretty average, something not helped by the lack of a two player option. Air hockey vs air hockey no matter how much you try and tart it up.

The presentation for Shuf-flepuck Cafe is excellent. It's good to look at, with large, imaginatively drawn characters. They're neat ly animated too, with good facial expressions and reactions the comic touches are well observed, with some nice moments – like when Lexan Smythe-Worthington slumps under the table, rat-arsed, with a crash after losing. Sound, too, is good with a solid puck sound and a nice sampled smash when you score. In fact that provides much of the appeal of play-ing it game.

The early appeal of good graphics and sound is dulled by the limitations of the gameplay. Were Shufflepuck one of a number of games on a multi-sports simula-tion I'd say it was a highlight, but not on its own.

• Mike Pattenden

MINI PIC

| ATARI ST | £19.99dk | IMMINENT | AMIGA | £19.99dk | OUT NOW |

| GRAPHICS 9 | IQ FACTOR 5 | AUDIO 9 | FUN FACTOR 3 |

ACE RATING 695

ALL POINTS BULLETIN

DOMARK send out an All Points Bulletin

IN the arcade wars nowhere is the battle for coins tougher than in the racing game category. There are very slim pickings for speed and place. Gamers who pump dosh in to racing games seek out the fastest, newest, prettiest machines around. Tengen enjoyed a good run at the top slot with APB – a racing game that added a touch of humour and a cops and robbers scenario as a hook to the main business of racing through the streets.

You are officer Bob for a week on a mission to cruise the streets of a downtown American city picking up as many villains as you can. You are given a quota of the number of criminals to be arrested – which you must resist if you are keep your job, i.e. stay in the game.

The graphical feel of the coin-op has been faithfully reproduced. It has a cartoon flavour about it – something that seems to be the hallmark of Tengen games since Xybots and Vindicators. Bright colours are also very much in evidence, particularly in the driving scenes and criminal apprehending screens back at the station.

The game presents an overhead view of the action with the screen split into two sections. In the left two thirds of the screens is your squad car and the scrolling road. The right hand side shows the score board, listing your arrests so far today, revenues collected, and time left to reach your quota.

Your squad car can be souped up by paying a visit to the Speed Shop. Here you can purchase radar, armour, better brakes and improved acceleration. You will need money to pay for these items, though, and to get it you must outperform your daily quotas.

There are a number of ways of getting cash. Picking up hitchhikers, litter bugs, and drunks pays a few dollars – but the way to earn real money is to go after the arch-villains. Sid Sniper and Freddy Freak are the meanest dudes on the block and you will occasionally put an APB (All Points Bulletin) from HQ to apprehend them.

This is where the real fun begins. To arrest them you must position your Steering Wheel Cursor over their car then switch on your siren. They may not stop immediately so you have to be ready to give chase. But as every cop will tell you, chasing criminals through a built up area is a highly dangerous business. You are the hero if you catch them but should you crash – injuring a member of the public in the process – then your head will be on the chopping block. Demerit points are deducted from

Officer Bob gets the villains in his sights.

your score in this event. Get too many of these and you're fired.

Catching the criminals is one thing – get ting them to confess is another. This extra game element of crashboning the criminals gives APB another dimension; a joystick waggling dimension to be precise. The faster you waggle the closer the villain gets to spilling the beans. A barometer shows your rate of progress. If you don't wring a confession from him before the Chief comes in then you lose your chance to pick up bonus payments by meeting your quota for the day. One good criminal confession is worth a whole day's work picking up drunks and petty thieves.

APB is certainly fun. Graphics, sound, and the smoothness of animation all hit the quality levels that a Tengen title needs to convert effectively to home use. The problem is that

the basic game design is not really suited to the hours, days, and weeks of play that a home computer game needs to justify its price tag. At 20p for a few minutes entertainment APB works fine as a coin-op. At £20 to play it at home on your Amiga or ST I am not so sure. If you were totally addicted to the coin-op go for it. If not – try before you buy is ACE's advice.

● Eugene Lacey

PREDICTED INTEREST CURVE

An entertaining and amusing arcade game that will provide a few weeks of fun, but there's not enough there to make it a classic.

RELEASE BOX

ATARI ST	£19.99dk	OUT NOW
AMIGA	£19.99dk	IMMINENT
SPEC 128	£9.99cs • £014.99dk	IMMINENT
AMSTRAD	£9.99cs • £14.99dk	IMMINENT
C64/128	£9.99cs • £14.99dk	IMMINENT
IBM PC	£24.99dk	IMMINENT

ATARI ST VERSION

Bright colours are the hallmarks of Tengen titles and the ST does well to reproduce this feature of the coin-op. Sound FX are fine – particularly the siren that screams out when you attempt to arrest the villains.

| GRAPHICS | 8 | IQ FACTOR | 8 |
| AUDIO | 7 | FUN FACTOR | 8 |

ACE RATING 762

TURBO

MICROILLUSIONS rev up for death race 1989

MICROILLUSIONS were a software house that promised great things when they first came to most people's attention by coding the game Faery Tale - given away free with the first first batch of Amiga 500's off the production line.

A Gauntlet-style adventure that scrolled smoothly in four directions, Faery Tale was an early demonstration of the graphical excellence that could be achieved on the Amiga. Gameplay was iffy - but as a foretaste of things to come the game was a milestone. The strangest thing of all is that after Faery Tale, Microillusions became something of a fairy tale themselves.

Until now, that is. They have appointed a new UK distributor and are back with a new racing game called ...Turbo.

The instructions are sparse - "You have just entered a death race with no rules and no judges" - and the aim is correspondingly simple, to get to the end of the course and kill off as many other road users as possible without getting nicked by the cops.

The gameplay is viewed from above, as in the coin-op game Championship Sprint though Turbo has a linear track rather than a circuit. The left hand portion of the screen is the action window with your speedometer and progressive map of your progress to the right.

It is essential to pick up the various weapons that are scattered around the road ways. You get these by driving onto them. The missiles, grenades, and oil are most effective for seeing off your opponents - but have to be used sparingly or the police will make chase sirens blaring.

The race track takes you through three levels - town, country and desert and you are racing against the clock to reach the finish. There are many hazards to be avoided: level crossings and roundabouts loom up in front of you in a split second, so it's a good job that your car

can break quickly to avoid these hazards. In fact it can be made to break and accelerate even more rapidly by picking up the wheel power-ups.

In the town section of the game several pedestrians are represented by tiny dots making their way across the streets. Mow any off these down and they become larger red dots as the computer emits a horrifying scream.

Sound FX are generally impressive throughout. I particularly liked the throaty acceleration sound and breaking noises as you screech to a halt in front of an obstacle. The police sirens are also authentic sounding as cop cars attempt to bump you off the road for mowing down too many pedestrians.

Just one thing seems a bit odd. You actually lose points for mowing down pedestrians. Whatever happened to the motorists rule that you get top marks for grannies and traffic wardens? Turbo re- presented and gametested to track-tionally high American standards. Three game play modes enable you to play against the computer, against a friend, or against a

friend via a modem link. Computer racing fans should definitely take a look at this one.

● Eugene Lacey

PREDICTED INTEREST CURVE

It will take you a while to master the use of all of the weapons and power-ups. But once you do, the two player entertainment value of Turbo is fairly timeless.

RELEASE BOX	
AMIGA £19.95dr	OUT NOW
No other versions planned	

AMIGA VERSION
Sound is where the Amiga is used to best effect in Turbo. The sound FX are not only impressive but, more importantly, they are well synchronised with the game play. Graphics are adequate - and could have been better

GRAPHICS	6	IQ FACTOR 7
AUDIO	8	FUN FACTOR 8
ACE RATING 850		

Advanced Computer Entertainment **69**

Keep your eyes on those, chum, or you'll be frazzled before you can blink twice!

SHADOW OF THE BEAST

PSYGNOSIS go all out for revenge

NOT content with the market they reside in, Psygnosis have decided to rock the packaging and marketing boats once more with the release of their most stunning product ever. Beast, or to give it it's full title, Shadow Of The Beast is packaged not only in an extraordinarily large box (the size of two Psyclapse boxes) with a piece of specially commissioned Roger Dean artwork, but also comes with a high quality T-shirt complete with yet another original piece of Mr Dean's. So obviously Psygnosis must have a pretty hot product to back up such a marketing gamble, right?

You're not wrong. Beast is certainly a very impressive game. For a start, at present it's planned as Amiga only, which means the programmers have had no ST conversion restrictions. And once you take a look at some of the statistics, you'll start to wash most other programmers would give themselves a rest from the same worries.

No less than 13 levels of smooth parallax scrolling, which is really a sight to behold. The

scrolling updates 50 times a second – that's the speed of a coin-op – and there are up to 128 colours on screen at once. And that's only the start; there's the sound to be taken into consideration yet.

It's all composed by none other than Dave Whittaker and ported directly from a KORG M1 keyboard (as used by up and coming Noo Jersey rockers Saraya). There's over 900K of it which, we are reliably informed, is more than the music from the Thunderbirds and Afterburner coin-ops put together. What's more, it's also some of the best work Whittaker's ever done, catchy, atmospheric and it's got that all important rock guitar sample.

The theme of the game is revenge. Stolen from your parents at their sacrifice and turned into a bestial messenger for the Beast-images through various metamorphic potions and deep hypnotic suggestion, the Beast-images thought they had destroyed all remnants of the human inside you. How wrong they were. The beauty within the beast has awoken, and now it's after

blood for blood. The death of the master for the death of his parents.

But before he can reach the master, he has to travel through several areas, each with its own predators and its own traps. Out in the wilderness, for example, you are assailed by rampaging eagles and low flying boulders. Fur

ther along in the game you are assailed by such wonders as eyeballs, Psygnosis insignia and lightning!

The whole thing is played over a multi-directional scrolling playfield - and what scrolling! The 13 levels of perfect parallax are incredible to see, putting most games to shame

Fighting back couldn't be simpler. To start with, and indeed through most of the game, he uses his developed strength and speed to merely punch the enemy away with a resounding thud. Later in the game you can pick up laser guns, stun guns and jet packs which allow you to fly all over the screen.

And that's not the only thing you can pick up either. By punching open certain backdrop objects such a coffins, monoliths and chests, you can find various potions. Some of them do nice things, like give you more energy and punch power, while others detract from them. The only real problem is that they all look the same. The only way of telling which is which is through good old trial and error. Thankfully, all potions remain in set places for every game,

PREDICTED INTEREST CURVE

Graphics and sound give it instant appeal, and the size keeps you going, but like all arcade games it won't, unfortunately, last for ever...

so a couple of trips through each level should be enough for you to learn which are best left alone

All the game graphics are amazing. The backdrops are exquisitely drawn and the sprites are fairly stunning. All that plus loads of Roger Dean artwork, what more could you ask for?

Gamewise, I have to say this does feel and look ever so slightly like it's namesake Altered Beast. That said, there's a lot more to this,

There's more to Beast than mere blasting and punching - grab that key to get on.

what with all these puzzles and whatnot.

What would have been simply a fair game has been turned into an excellent one: simply because the company took a little care over the product. Well done to Psygnosis. Yes, it is a little more costly than your average Amiga game, but when you think you're getting a free Roger Dean T-Shirt, can you really complain?

● Tony Dillon

Stunning parallax scrolling and provide a graphical presentation that's going to be hard to beat.

BATTLE VALLEY

Hewson send in the choppers and tanks

Taking on more ammunition for the shoot out with the terrorists.

AT last a shoot 'em up with a bit more to do than simply staying alive and collecting power-ups.

The world is being held to ransom by a group of international terrorists who threaten to fire two nuclear missiles unless their colleagues are released from jails in the USA.

Your task is to eliminate the missiles that are holed up in the terrorists' stronghold – Battle Valley – in the middle of the desert.

Using a chopper and armoured vehicle it is down to you to battle through the terrorist defences, capture them and eliminate the missiles.

You start your mission in a chopper which emerges from a sky dome. It's a light weight attack chopper in the meld of a Lynx – with high powered missiles. But the chopper is not magically armed with an unlimited supply of missiles and fuel. You have to keep an eye on your gauges and refuel or re-arm when you start running out. The rearming operation is carried out by hovering above the arms dump and letting down a chain to pick up a box of

missiles and then winching them back on board. The winch is also used later in the game when you have to pick up a huge section of steel and manoeuvre it into place to repair a bridge so that your army can get through to Battle Valley to bombard the terrorists. These strategic elements make for a far more enjoyable a ree – reminiscent of the classic Broderbund title Choplifter.

Battle Valley features an impressive parallax scroll on three levels – with sky, mountain tops, and foreground all moving accurately as your chopper whizzes by.

Later in the game – when you have successfully repaired the bridges you can go back to base and hop into the armoured vehicle. Now you are ready to take on the terrorists. This section of the game is not quite as impressive graphically as the chopper sequences. The caterpillar tracks of the small tank appear to float on air at one or two points when they negotiate bumps and hillocks. It is every bit as good a blast as the aerial scenes though. Stacks of enemy ground installations must be

taken out before you progress towards Battle Valley itself and the final show down, all the while dodging a fierce ground and aerial bombardment.

Each of the missiles is protected within a separate compound so when you have destroyed one you return to HQ and then make ready to liberate the second one. Should you lose all of your lives before completing your mission you get to see the ubiquitous nuclear mushroom cloud and a message telling you have failed.

One small personal quibble: what is it about programmers that they are so fond of including the holocaust cloud in their games? We must have seen it half a dozen times in the last six months in different games. Bad taste, or what?

Anyway that grumble aside, Battle Valley is a deep and challenging arcade game. The time factor and strategic elements add a very welcome 'thinking' dimension to this smooth and colourful shoot 'em up.

● Eugene Lacey

AMIGA VERSION

Coded for Hewson by Creative Thought a clear mastery of Amiga graphics and sound is very much in evidence. The smoothness of the animation makes the game. Particularly in the slower parts of the game where you are manoeuvring the chopper. Excellent parallax effects and loud booming sound FX for the explosions.

GRAPHICS	7	IQ FACTOR 5
AUDIO	7	FUN FACTOR 8

ACE RATING 815

RELEASE BOX

AMIGA	£19.99dk	OCTOBER

PREDICTED INTEREST CURVE

Entertaining and reasonably deep arcade game. The trouble is once you've beaten the terrorists you are unlikely to want to play it again.

The bridges need to be repaired to enable the armoured cars to get across.

BATTLETECH

Take command in this RPG/arcade combination...

The Citadel

1. In the beginning, keep investing all current financial assets at one of the three available companies, DefHes, NasDiv or BakPharm. Be very wary with BakPharm as its value is subject to tremendous fluctuation. Clever investing will nearly double your money. It's also wise to place a large bulk of your money into a low risk account.

The accounts update every time you receive 15 C-Bills, so it's best to keep a walk around/investment routine going in the early stages

2. When you have enough money, buy an SMG from the gunshop – even better try to purchase an Inler no, this little weapon wipes out people in one shot as well as giving you a chance to escape from enemy Mech's. Then go to the Citadel building and enrol in SMG and Mech weapon classes until you become good in both skills.
3. The next thing you need is armour. Buy a flak snt as these represent the best protection for your money
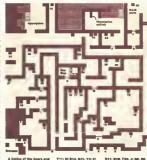
Training Missions

Don't attempt these straight away! Let your investments grow first.
Mission 1. Use a locust for this one
Mission 2. A Chameleon as it has hands.
Mission 3. Again use a Chameleon.
Mission 4. As above.
Mission 5. Real combat! Use a Chameleon and control it yourself Keep in forests for cover, even better stand in a lake to keep the Mech cool Only use weapons that are in range of the enemy as this will help to prevent overheating When the Mech has been trashed

A listing of the doors and the codes to open them
A) B1,B3,Y3; B)
B2,R7,Y1a; C) R13, R14,

go to the lounge and talk to a character called Dick Atlas, he'll give you something very useful.
Mission 6. The same as 5, though this time split your firepower between the two Mechs.
Mission 7. Whatever you do, don't fight the Jenners. They have thicker armour and a lot more power than your Mech. Instead, turn tail and run the second the mission starts. You should find a gap in the fence a short distance above the entrance to the training ground. When you and your Mech are back in the main area of the Citadel run for the gap in the man wall which is at the bottom of the west side. If you do make it head straight for the Starport and get your Mech patched up there.

Starport

If your Mech is in good condition your might be able to handle combat with another Mech, though

Y11; D) R13, R31, Y4; E)
R36, B53, Y10; F) R36,
B24, Y16; G) R35, B12,
Y6; H) R36, B87, Y23; I)

this is not advised at this stage. Taking on human groups however is perfectly acceptable

Once you've entered the Starport (through the Mech park) head immediately for the clothes shop; a small oblong building close to a lake Purchase some new clothes then head off towards the barangrail hall Read the text, then leave Wander around the city for a minutes then return to the hall once more You should now find a party going on and meet a man called Rex Outside he will give you several things You will then be attacked – Ilee!

Head for the Comstar building and withdraw 150 C-Bills Go to the Mech park and pay the attendant, you should now have a new Mech

Spend quite a while wander ing around the nearby area buying combat wares possible. Then return to the Starport. With a bit

R17, B18, Y36; J) R6, R6,
Y31; K) R36, R25, Y32

of luck you should have lots a lots of money in Comstar Will draw all but a thousand C-Bills an go to the MechE-Labe to get your previous Mech repaired. If you have enough money left ove soup-up both Mechs at the open shop. Take both Mech's out at cost of 150 a piece It is also wise to take out an apprentice ship, as this enables you to salvage beaten up battlefield Mech to take back and repair.

The Crescent Hawks

Head back to the ruined citadel and enter the Barracks through the hole in the north wall. The holodisk that Rex gave you wi then be played causing the inve tors hut to appear on the map

Leave the Citadel and head for the city NE of the Starport. G to the prison and free the captured Crescent Hawk. Then try to retrieve his impounded Mech. You should now have three Mech's in the party. After this go around the various cities At the MechEnblock ask to apprentice – with a bit of luck you should find a Crescent Hawk At the hospitals keep searching the medical records until you are approached by another Crescent Hawk These two should be a technican and doctor respectively Try to get their specialist skills up to excellent, you'll need them later on.

When the group of five has been assembled make sure they are armed with Infernos and Flak surts – you should have more than enough money by now If you are uneasy about somebody in your party, fight a brief battle and if he isn't in a Mech he'll be killed Their last his replacement

The Inventor's Hut

This is located in the NW, a long way from the Starport When you've answered the relevant questions the inventor will appear to repair the holodisk He will also tell you that the Starleague cache is to the SE, in a cave, on an island

The Starleague Cache

The map of the Starleague centre shows all the code terminals, doors and important features necessary to complete the game. The codes for all the doors are found in a lael from A to K at the top of the map.

In order to finish the game you must open all the doors, link

The locations of the various cities.   The position of the inventor's hut.   The position of the Star League Cache

The Starleague cache

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e game
doors, find

the Mech parts store and then go
down to the star map. Here you
must highlight the following plan-
ets, Pesht, Benjamin, Skye, Ryer-
son, Kathil and Achenter. Then go

to the Terminal near the entrance
ladder and you will be given the
white code. Go and switch on the
Hyperplate generator, and then
go to the Hyperpulse itself. If

everything has been done correct
ly you're there!

CONFLICT EUROPE

Nearly there for Nato, only a few more Pact units left.

If World War Three is
going badly for you, try
some of these tips, they
could just make a dif-
ference.

NATO Strategy.

NATO's main role is to halt the
Warsaw Pact advance before the
red steamroller reaches France
Depending on the scenario and
strength of units there are a num-
ber of ways of accomplishing this
The first requires Nato to
open a gap at the centre of the

pact line The quickest way
of doing this is to set a
down or so planeS on
assault breaker, set your
units to chemical weapons
and launch a single nuclear
strike early on at the
strongeat, most central
unit. Before long a gap of
two squares should have
been opened *Send your
three nearest, strongest
units through the gap
behind the northern pact
armies. Keep these three
units supplied as best as
possible The only major
obstacle will be the 9th
Shock Army who have an
army strength of nine Con-
centrate your assault
breakers on this and and
try to whittle it down Also
set ten squadrons of
planes to attack supply
lines in order to prevent
the Sovets from restock-
ing This should end with
the Pact northern armies
being eliminated leaving
you to concentrate all
efforts on the weaker
southern army group.

Warsaw Pact
Strategy
The Warsaw Pact role is
easier. Try to drive three
army groups through the
centre, top and bottom of
the NATO line as the objec
tive is to conquer France
and West Germany rather than
get bogged down in combat
Don't waste time attacking neu
tral units either as it just wastes
time If you really do feel like
massed combat, use one or two
single nuclear strikes plus chemi
cal weaponary, this should prove
fun, if not lengty

Nuclear Tactics
Whie not the most devastating,
single nuclear strikes are the
safest They stand a lesser
chance of provoking heavy retali
ation and more importantly limit
civilian casaulties, helping to give
you a good score If towards the
end of the thirty days it looks as
though you are not going to com-
plete your goal there is a firepian
that will eliminate eight enemy
units - also a good move to use
when you are on the verge of
defeat as it can swing the course
of the war One side-effect it
does carry is a potentialy large
reprisal from the enemy, so be
warned

And remember, the object is
not to end civilisation, but to tri-
umph with minimal civilan and
military deaths

Advanced Computer Entertainment **75**

SPHERICAL

Not only do you get the Thunderbirds codes this month (see below), but the passwords for Spherical too!

One player mode
RADAGAST
YARMAK
ORCSLAYER
SKYFIRE
MIRGAL

Two player mode
GHANMA
GLIEP
MOURNBLADE
JADAWIN
GUMBACHACHMAL

Paul Reilly, York

VOYAGER

To access the cheat mode on Voyager simply type 'WHEN THE SWEET SHOWERS OF APRIL FALL' on the main option screen, you will be granted a cheat option. Select this and you will be able to choose up to three different types of cheats; infinite shields, fuel and equipment.

Also, when the main cheat mode is active, by pressing 'Enter' on the main option screen you activate some extra functions:-

Shift, undo, help
Cycle through objects

Cursor keys
Rotate object

Then try pressing:

7 - to decrease size of object
4 - to enlarge size of object

Also when in cheat mode try these:

F1 - Go down a level
F2 - Go up a level
F3 - Cycle through languages
F8 - Game position
F9 - Data on object
F10 - Frame rate

When you've checked out all those, try investigating object number 0058...

Thanks to Rob Barrington and Dan Meacham of Uttoxeter.

THUNDERBIRDS

Here they are! The exclusive codes for all the levels.
Level 1 - No password required
Level 2 - Recovery
Level 3 - Abbysaus
Level 4 - Anderson

Thanks to Phil Palmer, Devon. Any more Thunderbird tipsters out there?

OPPORTUNITY POKES!

If you can map, crack, poke or solve games we need you! We're looking for a team of games masters who can contribute to the already high standard of information presented in ACE.

So if you enjoy meeting a challenge you could earn yourself recognition, the latest software and money!

Send examples of your work plus your name and address to:-

Let me write TNT
Ace
Priory Court
30-32 Farringdon Lane
London
EC1R 3AU
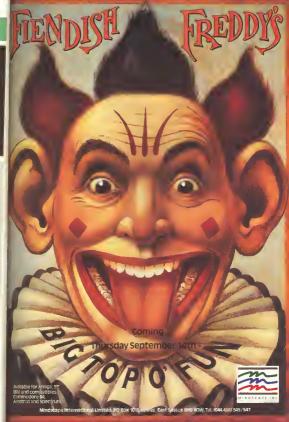
VIGILANTE

Madonna is being held hostage while her boyfriend is being locked around the local streets, what can you do? Try typing GREEN CRYSTAL on the high score table. Pressing F1 during the game will give you an extra life and F8 will take you to the next level.

D Price, Wirral

FIENDISH FREDDY'S

Coming
Thursday September 14th

BIG TOP O' FUN

Available for Amiga, ST
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Commodore 64,
Amstrad and Spectrum.

MINDSCAPE INC

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ALTERED BEAST

● Lastly, to kill the end-of-game nasty, stay in the corner of the screen and keep shooting. When he comes up to you, jump over him and shoot him in the back.

To continue the game when you die :

Push up and left and both buttons. To repeat it press both buttons and right or left or up or down. If this doesn't work press both buttons and up-left, up-right, down-left, down-right.

Mark Sanders, Manchester

Or try this . to gain an extra life press top left and press the start button

Daniel Elzein, London

● To kill the first boss run up to him and keep shooting. When he is about to drop his head on you, run to the side. Keep repeating this to kill him

● When you arrive at the second boss go right up to the eye and keep shooting. You'll get over run by other eyes, so press button 1 to get rid of them

● The third boss is pretty simple. Keep shooting at him and duck when he fires back

ARCHIPELAGOS

PC Version

Solve Archipelago One. Press RETURN to select an Archipelago and type 8421 and press RETURN. Press RETURN again and you can select any Archipelago from 1 to 9999

ST and Amiga Versions

Solve Archipelagos One and Two. Press RETURN to select an Archipelago and type 8421 and press RETURN. Press RETURN again and you can select any Archipelago between 1 and 9999.

Every fifth Archipelago in the first one hundred is the most interesting as these are pre-designed by the programmers. There are many very tricky and highly complex Archipelagos to be seen. Try number 5942 as an example!

Thanks to Logotron themselves!

NAVY MOVES

The entry code for part two is 2977 and the solution is as follows:

From the start R, D, R, Shoot 2nd Official and take his code, L, U enter door, R, shoot 1st official and take his code, L enter door, U, R, R, R, D, D, R, U, enter door, D, enter "EMERGE" on the com-

puter followed by the 1st Official's code, now type "STOP MOTOR" and enter 1st Official's code again, L, U, L, L, enter the door on the right, U, L, enter door, U R, R, R, R, D, enter door, R, enter door, R, enter door, R, D, D, L, L, L, shoot the Transmission Official and take his code, L, type on the computer "OPEN

DOOR" then enter 2nd Official's code, L, set bomb on left side of the screen, R, R, R, R, R, U, U, R, type on computer "Transmit" then enter transmissions Officials code, now enter "OABERBYAMD", L, L, U, U, U, go to the left side of screen

Tommy Aitken, Scotland

UPDATES

CTW

SE

Cons
Maga
By To

1. A
   P
3. G
4. C
5. Z
6. C
7. C
8. G
   (L
   F
   S
10. Y

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ROCKET RANGER

Cinemaware, ST £24.99: Amiga version reviewed issue 15, Ace rating 814

Based around the cult movie series King of The Rocket Men, Rocket Ranger transports you back in time to the late nineteen thirties. Here we find the Nazi's building a giant rocket base from which they will dominate the world. Only one person can stop him.

It's been a long time since Rocket Ranger first appeared on the Amiga. As usual with Cinemaware software it featured very high quality graphics and sound accompanied with some superb plotting and execution. And we're glad to say the ST version is every bit as good, in fact almost identical. The only real gripe about the conversion is that it comes on three disks, with a tremendous amount of disk swapping.

Even with the disk swapping Rocket Ranger is an absorbing, taxing game which should appeal to most people who like challenging interactive adventure moves.

ACE RATING 805

Rocket Ranger on the ST

NEW ZEALAND STORY

Ocean, C64 £9.95cs: Amiga version reviewed issue 24 Ace Rating 875

The hi-res graphics are very neat and tidy, though the amount of browns and yellows used on the colour scheme leave a little bit to be desired. The sound track is as cutesy as ever and complement the game perfectly. Most importantly though it is immensely playable, even if it does drop a few points to the 16 bit predecessor.

ACE RATING 875

JACK NICHOLAS' GREATEST 18 HOLES OF MAJOR CHAMPIONSHIP GOLF

Accolade, Amiga £24.95dk: PC version reviewed issue 23, Ace Rating 870

Until now the only way of getting a really good outing on the green in bad weather was via Leaderboard At last the domination of that market was broken by the PC and C64 version of this game in typical Accolade style it features digitised pictures, speech and glossy intro screens, which help present an equally glossy game.

All the major features you'd expect are here: slices and hooks, water, mud, rough, bunkers in fact everything but the crowd. The only constraint is the length of time taken to draw up the screen, roughly three seconds, though it seems longer.

The ideal game for the golf enthusiast, plays well, looks good, preforms well. Thumbs up to Accolade

Ace Rating 890

ROBOCOP

Ocean, Amiga £19.95dk: Spectrum version reviewed issue 16, Ace rating 807

Shortly after the appearance of the ST version Ocean promised that Amiga Robocop would feature full screen graphics as opposed to the ridiculous metallic border, plus lots of extra effects Sadly the penny didn't drop that way and what we were left with was an almost identical port from the ST.

Looking on the bright side though, it is a pretty good game Not an actual arcade conversion but the licence of the film, Ocean had the ability to make the odd tweaks and changes to the layout These include several between level sequence such as a shooting range and matching photo-fit pictures

Unfortunate to see a port over from the ST, but still a pretty good, playable game.

ACE RATING 810

NEW ZEALAND STORY

Ocean, Spectrum £8.95cs: Amiga version reviewed issue 24 Ace Rating 875

Although pipped at the post by Rainbow Islands on the 16-bit versions, the eight-bit conversions of New Zealand Story have been surprisingly good (check out the C64 version elsewhere on this page). The Spectrum conversion is particularly impressive As usual the Spectrum mix is monochromatic with black on yellow as the colour choice Despite this it still plays very well and holds its own in comparison A game worthy of a place in the collection

ACE RATING 860

New Zealand Story

POWER DRIFT

IN POLE POSITION...

SEGA   ACTIVISION

GREAT AMIGA CONVERSION

PAPERBOY
Elite Amiga £19.99

Everybody's favourite coin-op comes to the Amiga at last and has never felt as at home. Take the word Arcade, add the word Perfect (I used to be a big fan of Sesame Street) and the word Perfect (I used to be a big fan of Sesame Street) and there you have a phrase to describe Elite's conversion. To describe simply how the game works, you are a paperboy and you have to deliver papers the American way, by throwing them at buildings very hard. So hard, you can topple plants, break windows, and level gravestones. Only a certain number of the houses on your run are subscribers, and you'd better be sure to deliver all of them. Any subscriber you miss out, instantly stops subscribing. Run out of subscribers and it's game over.

The graphics have been copied perfectly, as has the sound right down to the voices used. Fans of the original should most definitely get hold of this version, and people who have never heard of it should join the queue, otherwise you'll really be missing something.

ACE RATING 878

FUN ON THE C64

FIREPOWER
Microillusions, C64, £9.99 cs, £14.99 dk

Firepower may not have been a resounding success for Microillusions upon its release as an Amiga title a while back, but as a two player game it has few equals. Now being re-released by The Software Company Ltd, the C64 version has finally seen the light of day, and what a fitting conversion it is too.

This is how it works. Two players, either human or computer, fight a private war between themselves. Using a large base, full of guns, walls and buildings. Some of the buildings contain extra ammunition, some contain medical supplies and one of them contains the flag. By now you've probably already guessed the idea. Get into the opponent's base, steal the flag and get home again.

Played as a split screen multi scrolling plan view shoot'em-up, the playing area is huge, so just finding your opponent or his flag is a problem. To add to the problem, enemy guns fire constantly at you, as do the enemy helicopters that buzz overhead. Every shot detracts from your energy, and when your energy is spent, you lose a tank and start again back at your base.

The graphics are slightly blocky, as can only be expected with a 64 game, but well coloured, and the feel of the Amiga version has been carried very well indeed. Sound is limited to a constant rumbling of the tanks and booms noises, which does the job well enough.

The most important thing that could have been carried across, and one that has (thankfully), is the fun level. Even as an 8 bit game, Firepower is still extraordinarily fun to play. One definitely to look out for.

ACE RATING: 841

TRIVIAL AMIGA CONVERSION

TRIVIAL PURSUIT
Domark £19.99dk

The world's most boring board game comes to the Amiga, and now you can have hours of endless fun naming major river tributaries and correctly identifying the shape of Ghandi's birthmark.

The idea is simple. Move around the hexagonal board, answering trivia questions as you go along. Land on one of the corners of the board, and you get to answer a special question that, if answered correctly will result in you receiving a 'wedge' to fit in your piece. Display an amazing intellectual feat and obtain all six wedges, and it's a race to the centre of the board where you answer one final trivia question, chosen by everybody else from the six categories available, and then the game is yours.

The one real problem with TP is that it's just too easy to cheat. The computer asks you a question and then asks you whether you got it right or not. No form of input is required. There is the option to play solo, but as the only real challenge involved is trying to remain honest, it ain't fun.

Graphically it hardly pushes the Amiga to it's limits, and the sound wouldn't sound out of place on a 64. A pretty dull game, if you ask me, but if you like this sort of thing, you might as well buy the boardgame. After all an Amiga might look out of place at a yuppie dinner party.

ACE RATING: 695

KICK OFF

BLISTERING PACE PIXEL PERFECT PASSING SUPERB TACTICAL PLAY

* Full size multi-directional scrolling pitch.
* Option to practice and learn ball control, play corner and practice penalties.
* One or two player option. 4 distinct tactics.
* League competition for 3 to 8 players. Load and Save league facility.
* Simple controls to dribble, chip, pass, chip or head the ball, sliding tackle.
* 4 types of Corner Kicks, Penalties, Yellow and Red Cards, 12 different Referees. Host of other features.

KICK OFF
SCORES WITH REVIEWERS

PLAYING IT IS EASY - MASTERING IT WILL TAKE TIME - A LOT OF TIME

Ever wondered why so many people think computer games are 'evil', or what the bug was on Breakout, or how Donkey Kong got its name? Find out as Julian Rignall continues his history of the arcade phenomenon...

Within months of the first video games going into full production, the Japanese reported a coin shortage, and many extra millions had to be minted to cope with the growing demand. In Britain, arcade attendances quadrupled, and profits increased tenfold. Crimes were even reported! It was blamed for truancy, and with the help of typical media sensationalism, Space Invaders gained a certain notoriety, a stigma which, sadly, video games still bear today. The Invaders had landed...

The first arcade video game appeared during 1970. It was called Pong, and was a sort of two-player video tennis. Each contestant controlled a bat, with the idea to get the video ball past your opponent. The contest was judged over fifteen rounds. Banal stuff, really, but from little acorns...

An interesting point is that two years later, Nolan Bushnell, designer of the original Pong game, produced another video game called Computer Space. This was a one-on-one battle between a ship and a flying saucer, and its stylish black cabinet featured thrust and rotate controls! Unfortunately this little beastie arrived on the scene about six years too early – only 2000 machines were sold.

PacMan – surely the most famous video character of all time?

In the years up to 1978, coin-ops began to get increasingly more complicated. Breakout games created a mini craze, and developed with advancing walls, multi-balls and dynamic bats. The top Breakout game, Atari's Super Breakout, gave the player four different Breakout scenarios in one box. Incidentally, the first Breakout machines were bugged – if the ball first appeared on the right, there was a 25% chance that you wouldn't be able to get a particular brick on the fourth screen and you'd have to trash your game!

One-on-one tank and air combat games were also popular, where players fought one another with identical tanks, biplanes and jets. Driving games appeared, but were very simplistic, incorporating an overhead view and scrolling roads, of which Smokey Joe, a Fire Engine game, and Super Bug were prime examples. Also broke the mould with Night Driver, a 3D game in which the player raced down a road whose kerb was composed of white dots.

Sega also entered the video game market with two through-the-cockpit shoot 'em ups, but again technology limitations resulted in them being very simple. Graphics on all the early machines were black and white, and screen resolutions were very low, with lego-like sprites.

Bally finally introduced the first colour video game into the arcades early in 1978 with their revolutionary, but very expensive Star Fire. It was a 3D game and came in a large sit-in cabinet, but was still fairly simplistic, with the player attempting to shoot down craft suspiciously like the ones in Star Wars and Battlestar Galactica!

But finally, in mid-1978, Japanese psychologists came up with an idea that was to create the video game boom – Space Invaders. But even they didn't get it quite right. Bally developed simultaneously with Space Invaders was a game called Blue Shark, which the manufacturers were confidently backing as THE hot video game of the year. Space Invaders was merely considered a novelty which might become a bit of a cult machine.

How wrong they were...

INVADER INVASION

At the main Japanese trade show in the Summer of 78, early indication of the Space Invaders potential success came when hundreds of orders were taken on the spot. Blue Shark was soon forgotten as the Space Invaders boom really got underway. Within months you could buy Space Invader records, books, pencil cases, t-shirts, underwear... it was truly a phenomenon.

As the potential of Space Invaders was realised, copies and derivatives of the machine came onto the market. Believe it or not, the original Space Invaders wasn't copyrighted, and different manufacturers created Space Invaders Deluxe, Super Invaders, Space Invaders II, Fast Invaders, Space Invaders tabletop machines, colour Space Invaders... And so it continued, with the fidget

Astro Blaster appeared in 1981, and was one of the many Galaxian clones which appeared that year.

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ty little spritos ruling the roost for a year before other, better machines appeared in the arcades and the Invaders bubble finally burst.

The class of 1980 was a mixed bunch, with Invaders clones and derivatives still appearing in various forms. But the more interesting games included Atari's Missile Command, Centipede and Asteroids, Williams's highly advanced Defender, Galaxians (which would be cloned and used as the basis for a myriad of other machines over the following year and a half), Frogger, Battlezone, Scramble and Donkey Kong.

And of course there was PacMan, a machine that was responsible for the second arcade boom. The highly addictive and non-violent gameplay drew arcade punters from all quarters. Female arcade attendance increased tenfold, parents came to play... and those out to make a quick buck on the latest craze increased PacMan awareness with PacMan merchandising beyond belief – sweets, T-shirts, comics, a cartoon series, breakfast cereal, cuddly toys, towels, clocks, watches – the list was endless.

But sadly, PacMan was to be the last major arcade phenomenon. As coin-op manufacturers continued to release Invader/PacMan clones, arcadestars became bored and arcade attendances began to dwindle back to a more normal level. This, of course, spelled disaster for many companies, and during 1983 the arcade industry in America went through a very lean time, with many companies winding up business.

Even the advent of laser disk arcade machines couldn't bring back the punters who were lost from the PacMan games... and so the market finally settled down to meet the demand. These days the arcade industry is very healthy, but one wonders what surprises arcade manufacturers have in store for us over the next few years... and can they ever engineer a third massive video game boom?

The instruction diagram for Star Castle: sublimely simple: the manufacturers were confident that their 'Patented Vectorbeam Monitors' would draw the punters.

TIME, GENTLEMEN, PLEASE...

An interesting point to note about early video coin-ops was their game time limitations. Games that used a system of lives were rare. Instead other game mechanics were employed to make sure that games were short and coins kept on rolling in. For example, many combat games (Red Baron, Nite Flite Tank) were contests played over a fixed limit of sixteen rounds, thus limiting game time to a certain extent (unless of course you got two ways attempting to cause annoyance but not shoot ing each other). Other games were played over a time limit with the player having to score a set target to increase his time. As the game progressed the targets would become increasingly difficult to achieve, and coins barely even good players couldn't last for more than a few minutes. Lives certainly seemed like a good concept when first employed – games could last for a few seconds. But top players who could actually master games could play for hours on a single credit. In fact the record is over 87 hours! Nowadays arcade games always have a definite end, so that play time is limited – even to experts.

Sega's Space Trek was a typical example of a game limited by challenge rather than time. UFOs attack becomes fiercer with each new round, boosted the publicity. With strange disregard for profit, the game even gave you a second chance after you've lost all your ships.

Yet another Galaxians clone, Moon Cresta was one of the first games to feature progressive gameplay, enabling to increase your firepower by docking with other portions of your ship.

Midway's original Galaxians, the game that spawned a hundred others.

FEMALE ARCADESTERS

When the video game boom occurred, it was noted that players of the machines were predominantly male. In fact hardly any females actually played the machines at all! Why this was the case was a mystery that machine manufacturers tried to answer but couldn't... until Midway accidentally stumbled upon some sort of solution in 1980 when PacMan began to munch his way into the arcades. All of a sudden female arcade attendance increased ten-fold – PacMan was a game that appealed to both sexes! Its combination of skill and non-violence seemed to be the answer, but unfortunately neither Midway or any other coin-op manufacturers could follow up PacMan and as a result female attendance in the arcades slumped again, and has remained far lower than male attendance ever since!

MAKING IT...

AND NOT JUST MUSIC EITHER CAN MIDI EARN YOU £££s?

W e all know about MIDI, but many of us tend to overlook it because we assume that it requires either musical or detailed technical knowledge. You go out and buy your MIDI keyboard, your MIDI interface (or your ST note buffer), your MIDI software and then...and then what?

ACE has given several practical answers to this thorny question in previous issues, ranging from a guide to the MIDI standard itself (in the first four issues) to a detailed look at cheap keyboards and sound modules. This month, however, we're going to look at something completely different: the use of MIDI by people who want to make a living from it, not for games or software but for adverts, videos, plays, records and playing live.

We chose people at various stages of their respective careers from the pro muso with years of experience to the ones just starting out. By looking at their stories it provides you with the one thing you don't get with the soft ware - first hand experience. The interesting thing is that not all of them are musically OR computer literate - in fact all of them would admit to a slight phobia about computers in the inter stages. All of them have one thing in common though - a striving to achieve what they have set to do.
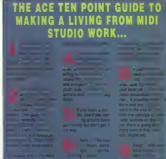
EDDIE GRAHAM

At the age of 16, Eddie Graham finished school, bought himself a synthesizer and decided to figure out all about MIDI. Having learnt about one instrument he bought another and repeated the process. In the meantime he found a studio and for from where he lived that was already using a Commodore 64 plus C-Lab 16 track software to produce tracks for anybody and anything.

This was in the front room of one John Purser, who had been adding bit by bit to his collection of keyboards and equipment, paying for it by playing any sort of gigs that came to hand. Dipping into some savings and borrowing money from relatives Eddie bought what was then a superior synth, albeit second-hand - a Yamaha DX5. By pooling resources with John he was able to gain not only valuable experience of putting tracks together for singers and artists but also first-hand knowledge of how computer sequencers worked with MIDI.

Two years ago the studio bought an ST 1040 and Sternberg Pro 24 sequencer having decided that the Commodore was too limited in speed and memory. As the money started to come in from sequencing backing tracks so the money went out in new equipment - The most expensive being an Akai 5900 sampler costing a shade under £2000. Because of the space limitations imposed by the size of the room the only way for it to work is to be purely MIDI based studio. The only 'live' recording area is about the size of the average fridge.

The big advantage that a low-cost MIDI based studio has is that your overheads are low. Provided you are able to provide a reasonable standard you can come in with some

THE ACE TEN POINT GUIDE TO MAKING A LIVING FROM MIDI STUDIO WORK...

1 [faded text]

2 [faded text] ... One good ... recently CD2000 ... with ... of sound effects. This can even be superseded

... recordist and therefore capable of ... or sound-hand buy. The software is ... e - Public Domain

3 ... will need recorder, preferably a 4-track plus a cassette deck to ... plus a decent set of ...

4 [faded text] ... willing to sound ... and everyone ... youth club ... camera club ... thing!

5 If you locate a studio, see if you can ... ng around there ... get friendly but don't get in the way

6 ... heck ... the nearest ... lleges some ight ... syt ms ... ing - green

7 ... Man in a portfolio ... f you wo ... while soundtracks in ... s p ... play prospective client ... needn't neces rily be t ... t t that ... depends on whether y ... see y ... self as a ... m

8 If you ... need s ... and ... share work, try your local par ... video production ... nies. If possible ... them and see ... went in the way or ... With the upsurge in ... adio stations on the ... ion there is going to ... more work in this ... ads jingles etc

9 Keep with ... local music ... take a ... erts at ... your ... r ... p

10 Keep y ... equi ... cle ... good shape, oth ... t t session could wind ... pile of hiss and crackle ... lowed by a blank ...

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very competitive rates. When even things like plugs, leads and sockets can mean a painful hole in your pocket you very quickly learn how to solder and build the odd bit or two to keep the costs down

One area of work they've developed is providing half-finished recordings! By acting as a pre-production studio, John and Eddie can come up with a complete backing track on a 16 track machine which can then be taken to a full-blown studio for acoustic instruments and vocals to be added. Madown can take place either there or in a smaller studio but the basic tracks have been provided at a fraction of the cost of doing the whole thing in the full studio. The 16 track can also be 'sinted' with a synchronization code to give the artists room to add further sequenced tracks or to work with video if necessary. To add this SMPTE code the studio is fitted out with a Jam Copper sync box which liaises between the speed of the tape and the speed of the computer sequencer.

Rifling his savings, Eddie added to the DX5 with a drum machine and then an ST 1040 running Steinberg's Pro 24. He then took the financial plunge and, donning kneepads, borrowed money from the bank having converted them that there was work there. He bought an EPS sampler and a Roland U110 multi-timbral sample player. This meant that he could work at home as well as helping out in the studio and try to get work for himself. Songs are started in his own home - the disk taken into the studio when it is free and then orchestrated in full and recorded onto the 16 track. Eddie is also getting work programming in other studios. At the time of writing he was working on a British Gas advert.

At present he is just about breaking even but both Eddie and his bank manager would appreciate a little more work. He is on 021 459-1727

DAVE AND ROSE

In good old entertainment agency terms, Dave and Rose are 'A Boy/Girl Duo' and work the clubs most weekends, averaging about three gigs a week, Dave on guitar. Rose on vocals and the rest from a D110 tone module. Their personal preferences are for music a-la-Blues Brothers and plenty of authentic Rhythm and Blues.

Not, in fact, the sort of act you would expect a computer to be of the remotest help with. Go back ten or fifteen years and the club circuit could afford to pay for a group to play every Friday, Saturday and Sunday, but as the money got tighter, the size of bands got smaller. To keep costs down it became common for singers to pay studio musicians to record a backing tape, but the initial investment for this would have cost Dave and Rose a small fortune in session fees. Although Dave is a drummer turned guitarist, his keyboard skills are reasonably limited so a period of trying to record their own backing tapes proved none too successful.

Reading about MIDI they decided to use a small dedicated sequencer along with a Roland sampling keyboard that is multi-timbral. "The disadvantage was that the sequencer could only correct minor timing errors quickly although it could record at a much slower pace and then be taken up to speed. The other problem was that I was a pain if you made a

WHY COMPUTERS MEAN LOWER COSTS FOR MUSICIANS...

In the professional world it is very common for musicians to build up tracks at home - store the sequences (and in some cases the sounds) on disk and then use a studio that they know has the same soft- and hardware. Rather than rehearse for hours or waste valuable studio time, everything is prepared beforehand

For the gigging musician a computer can save pounds in setting up sounds on the synths, sounds in storing sounds of the synths if you use what is known as a generic patch librarian, which in essence goes around to any piece of MIDI equipment and takes a copy of its memory, be it sounds or patterns.

As you will see, many acts use sequencing as an essential part of the set. Using a tiny LCD display on dedicated sequencers will save time and trouble and allow the musician to put his or her backing sequences together with less frustration and hence more attention to detail. Time is money, and besides which, a decently sequenced set gets you more work and sounds the part. Despite a certain amount of objections to this way of working, I have always been a believer in the maxim, 'Talent will out'.

mistake. It took so much time fiddling about trying to pinpoint the bum note that it was quicker to start that particular track over again. A few months back they therefore invested some big money into an ST 1040 plus C-Lab's Creator. This provides them with visual editing and sections of songs can be linked together with little more than the sweep of the mouse.

They added four the GSoundbrs 3D program which stores backups of their sound patches. Songs for the set are assembled while timing and even adding or doubling up on sections can be made before dumping out to the small PR100 Roland sequencer which they use live. The computer has enabled them to use their equipment in a much easier and far more practical manner.

JAMES ASHER

James works mainly from the 16 track studio at his home in London and writes music primarily for music libraries and televison. To date he has music uses as theme tunes for the world Chess Championships, a series called Gems and it has cropped up as background music for things as diverse as Tomorrows World and The Russ Abbot Show! He also runs a new-age record company called Lumina which has had three releases so far

James started by sending tapes of short, almost sci-fi, sound effects to libraries made

on his Roland Jupiter 8 as he figured that it was a good idea to pick on a topic that perhaps hadn't been exploited. Its acceptance and subsequent use led him to further work and more equipment – at present he's main machine, he uses an Akai/Linn MPC60 dedicated MIDI sequencer in conjunction with an Akai S1000 sampler and a host of other synths, mainly the Korg M1. The new-age music occupies a large portion of his time and for this it is the sound and blend of the instruments that is important.

He has an Amiga which at present he uses mainly for graphics but he has recently used the speech synthesis package on it as part of his new sound library CD 'Artificial Brain'. Although he saw the Amiga 'Muse X' package and viewed it with interest he is very happy with the sequencer he has, his point being that he has worked with the Akai for so long and is at one with the way it works. Like any well-used piece of creative soft- or hardware, it has become an extension of his hands and consequently is very fast to work with.

Setting up the record company was and still is a lot of work, he would advise anybody who is thinking of doing this to work out the distribution - say a mail order or a particular society that may be interested, and to have more than one album to be released initially. Also it is useful to have a partner to share the problems – both practical and financial

D110 WARNING
In issue 221 reviewed the Soundbits 3D sound editor for the Roland D10, D20 and D110. It transpires that as far as the D110 tone module goes Roland have been moving the MIDI addresses internally without making it public knowledge. Consequently 3D, in common with all other D110 programmers has problems in communicating with some modules. The only way to tell what model you have is to switch off, then power up holding buttons number 1, 3, and 5 down on the lower row of buttons and that is counting from the left. Anything higher than mk1.00 and most programs won't work. However if you have the latest mk1.10 everything should be OK. In doubt ring Roland on 01 568 4578.

HOUND OF SHADOW

Sneak preview of Electronic Arts' new RPG/text adventure

Electronic Arts have really given RPG'ers value for money over the past few years with titles like The Bards Tale series and Wasteland There's just one fly in the ointment – Interplay, the company responsible for these glowing titles, have decided to go it alone and publish their own games. Where does that leave Electronic Arts?

Developing products like Hound of Shadow, that's where. Obviously keen to maintain their reputation, EA are putting their all into this title number, and to keep up the continuity, RPG elements play a major part in the game.

However, and this should be good news for some hardboiled gamesters, EA are keen to 'demystify' RPG. Not only that, but they're aiming to have the best of both worlds in the game by strengthening the traditional graphic adventure element.

'We didn't want to produce another object-oriented adventure game with illogical puzzles,' said product manager Jos Ellis, 'instead we went for a knowledge based game where progress depends on the accumulation of skills and information.'

The program, developed by Eldritch Games, takes a leaf out of Infocom's book by capitalising on the fashionable attraction of H.P Lovecraft's horror stories, though Hound of Shadow takes its subject rather more seriously than Lurking Horror. The scenario is set in the 1920's and revolves around a contemporary map of central London – particularly the Soho/New Oxford Street area -which is pretty horrific even today, let alone sixty years ago.

You begin by attending a seance at which you discover that a certain Adept Karim is actually a fraud, but – more surprisingly – he is able to channel threatening and apparently genuine messages from some diabolic agency. Without giving the game away, the rest of the action involves gathering information as you move towards a confrontation with the ungodly

Part of the character definition routine: all choices are presented in 'graphics' form. In this case, you have to specify what you character did in the war. Beware: too much war experience may sharpen your skills, but it will also render you liable to fits of insanity!

CHARACTER POINTS

Like any RPG-based game, the first thing you do in Hound of Shadow is define your game persona There are no 'parties' in this game – it's just you versus the universe. You start by choosing sex, age, and (perversely) your birth date. The computer then automatically generates values for eight main attributes that include ratings for physical attractiveness and height as well as the usual strength, dexterity and so on.

Strangely, you don't get to see exactly what these values are. Instead, the computer prints but a description of your character, dwelling on your good and bad points, as in 'You are good looking, of average height, and extremely clumsy...' There's reason behind this, however. EA were determined not to adopt the 'dice-and-data' approach to RPG'ing, since they felt that the complexity of many traditional RPG's put people off.

Personally, I rather like tables of numbers that tell me exactly how my character is defined, but I can understand the motives here. And reading a bespoke description of my persona, running to several lines of character and text, was an interesting experience.

In addition to the normal character attributes, you can choose a profession from several on offer, ranging from journalist to historian.

Your attributes do not change during a game, but your skills do, and it's here that the program becomes a little more conventional There are many different skills to master and these, in conjunction with your profession, are all initially set-up using attractive graphical displays, for charts, and icons. If you fail earlier that the computer was defining your character for you, you soon lose that feeling at this point.

Skills are particularly significant when combined with certain professions – a historian with good anthropological skills, for example, might be able to spot that the infamous Adept Karim's turban is actually tied the wrong way round. All this means that the progress of the game is clearly and unmistakably influenced by your character attributes, which makes a

Hound of Shadow boasts some beautiful digitised graphics that really enhance the atmosphere. The text isn't quite up to Infocom's Lurking Horror standard, but pics like these certainly help to make up the difference...

change from some RPGs where the only thing that seems to matter is how much strength you have left.

Skills not only affect the things you notice, but also how you interact with other characters and objects, so choosing them carefully (using an attractive icon-driven menu) is vital to success in the game

Once you've made your selection the program gives you a detailed text description of your character that runs to several lines. Sometimes these can be quite amusing, including such snippets as 'You are often called to sing at parties and are active with a knife' or 'You are quite an an ecc and can read people like a book'

After this distinctly character-dominated opening, the game springs another surprise by apparently changing styles into a typical (but very accomplished) text adventure. The difference, however, is that you spend less time finding and using objects and more time interacting with other people unearthing clues, and exploring. The textual descriptions are excellent (as are the graphics) and the parser, although it doesn't tell you which words it doesn't understand, is perfectly acceptable, including the useful GO TO (location) command as well as RAMSAVE, RAMLOAD, and good use of prepositions for looking 'behind' and 'under' nearby things.

Once you're into the adventure, time begins to tick by in the game as well as in real life and although the pace is for the most part leisurely you'll find that events suddenly accelerate once you get towards the end.

There's no doubt that Hound of Shadow is going to be a very attractive product when it hits the shelves We were only able to test a pre-release version, so any definitive rating has to wait until we see the finished product. However, what we've seen leads us to believe that EA without Interplay is not quite the sob story you may have expected. Stand by for a series of games that could well end up by giving Bards Tale a run for its money...

■ Steve Cooke

Tower of Babel is an intricate 3D strategy game involving an interconnecting network of towers, platforms and lifts rendered in solid 3D with innovative light and shading techniques. Take control of robot spiders and program them to solve problems and puzzles and interact with other creatures, such as Pushers, Zappers and Grabbers. Alternatively, time control is available to you at any time for instantaneous reaction to the game's development. For the more adventurous among you, there is a complete game designer, allowing the construction of your own series of towers, platforms and lifts. Attempt to fox your friends with your own fiendishly difficult creations. More than just a game, more than just a puzzle – Tower of Babel is a whole new concept in strategy gaming.

AVAILABLE FOR ST & AMIGA

Unit 1, Hampton Road Industrial Estate, Tetbury, Glos. GL8 8LD. Tel: 0666 504326/504412

Scenarios

SWORD OF ARAGON

SSI give you the chance to indulge in a little fantasy war-mongering...

I t's a bureaucrat's life being a fantasy war-lord. Slaying orcs is one thing but winning popular opinion with a few well-chosen tax cuts while you try to maintain a decent level of business investment is a task more suited to Maggie than a Visigoth (Some difference—Ed)

The medieval combat and economic management game has been around as long as I can remember. Feudal lords were trying to take over the neighbouring kingdom in much the same fashion back in the Dark Ages of the 2001 (so called because the screen went dark every time it had to think). But SSI see the sort of company to merely recreate a 16K 16-bit game on the PC. With a reputation as one of the longest established specialist strategy houses you can be sure that Sword of Aragon has a bright, sharp edge when it comes to new features.

The first is an element of everybody's favour of the moment – role playing. It's no longer enough just to be a anonymous player. You take on the guise of the son and heir to the Duke of Aladda, a just and good ruler who had sworn to rid the land of nasties and return order and wealth where now there is only chaos. Unfortunately to have progressed his clogs before he could complete this ambitious, not to say somewhat familiar, task.

You also get to choose your character type from Knight, Warrior, Mage, Ranger or Priest. Each has its own advantages and disadvantages - plus combat or magical abilities. You start with several noble supporters and others will join you as play progresses and their character class will be influenced by yours. You'll also advance by levels, depending on the daring deeds you do, just like any other good rpg character

Before you can set off adventuring you'll need to don your Nigel Lawson armour and take care of the peasants at home. Taking a tip from Tory policies I immediately dropped the tax rate a couple of percent while increasing basic agricultural spending. Result: a happy populace, which is useful when recruiting. Commands in this section are easy to enter, using a series of menus, and there's plenty of information to save you from slipping into the red, which in these barbaric times means bloodshed - your own!

The citizens get even more delighted when we moved out of the World Game and into battle with a band or orcs who came visiting from the north west. Arranging your troops will be familiar to seasoned wargamers. You select units with a square cursor and issue commands from a menu using initial letters.

Battle orders are sufficiently varied, providing both all out attack and more defensive patterns. There are ranged weapons and even spells, which become stronger as you gain experience. It you temporarily tire of telling the troops to attack you can switch to auto pilot, merely choosing how aggressive you want them to be. The micro may not fight the best tactics but it will suffice while you slope off for a coffee.

After the first fight you should find yourself in possession of one of your father's belongings. Bringing together the Scepter of the East, the Crown of the West and the Amulet of Nad-

OK, we're cheating, but just as we want to press we got this sneak preview screenshot of EA's new icon adventure, Keef the Thief. Coming soon to an ACE page near you...

do appears to be a vital part of solving the quest. You should also receive a new recruit who's so impressed by your military skills he signs up immediately. Then news of events around the kingdom will appear and it's up to you to choose which rumour to follow

Play progresses in a succession of monthly economic decisions followed by movement and battle sequences, during which you'll uncover the secrets of the unexplored central areas of Aragon and try to control its settlements. You can't afford to neglect either aspect. Though ultimate victory can only be obtained by exploration and military means, you depend on the civilian population for the gold pieces to maintain your armies and the raw recruits who'll

man them.

SSI describes this as epic and its grand scale is undeniable. For hardened strategists the sheer complexity will probably override the sense of deja vu about the scenario. But new-comers to the game may well be overwhelmed by the number of factors under their control. It's also a rather coldly mechanical experience compared with rpg's such as the Dungeons and Dragons series (see box). If you really want to relate to your characters, you may find this Sword rather rusty.

● John Minson

Sword of Aragon – wargaming with fantasy elements

LANDSCAPE 94
Richly built wargame style maps and blocky movement, but plenty to explore in the game ...

ENCOUNTERS 66
Standard selection of fantasy beasts plus humans who will react individually depending on character. Combat is based on traditional wargaming techniques with many recommends and good options.

CHALLENGE 85
Vast and complex – it anything, too much so. Could be off-putting for the more casual fantasy game, but wargame addicts will have plenty to keep them busy.

SYSTEM 95
A very old-fashioned front-end, whether viewed from the adventure/RPG or the wargame angle. Programs like SWG and Ultima V are pushing the boundaries back and, Aragon doesn't seem to be keeping pace...

ACE RATING
755

Sword of Aragon attempts to cover every aspect of being a fantasy world ruler, from leading your troops into battle to maintaining a stable economy. It rather overreaches itself, resulting in a game which will keep strategy obsessives engrossed but will prove too involved for many people.

CHIPS AND COUNTERS

Sword of Aragon is an interesting refinement of an ancient genre. Unfortunately its designers still seem trapped by some of the traditions of wargaming.

Reading the manual reveals the designers' ancestry: references to hexes and stacking limits indicate that thats thinking is still firmly rooted in cardboard counters and hexagonal grids. It's a pity when you can do so much more in modern presentation with a computer

However the number crunching power of the micro does free up the player from the vast and complex rule books and endless calculations which makes many traditional games

so infuriating for all but the most dedicated players. The amount of time you'd spend cross-referencing tables and rolling die for a game of this scale would make it near impossible to play

In this new Sword of Aragon is perhaps best seen as a computer simulation of board game. In this light it scores highly and will please players. But pure computer gamers should think carefully before buying.

NO PROBLEM!

Just room this month for help with ST Chronoquest (which everyone seems to be cursing over) and a few juicy tips for Manhunter new York. Keep those tippies coming in...

CHRONO QUEST THE SOLUTION

India: This is the first time period you must visit. Use the first door in the slot. After the rematerialisation in India go W. Enter the house and USE your gloves on the man's hand. Go S, E, E, NE. USE the note the man gives you on the mahout. Enter the temple and USE the bottle in the water. Exit temple and ride elephant. Go to the man. USE water on his hand. Get key then go S, E. Go N. USE key on door. Go N, and get piece of punch card. Then go S, W, W. Get scroll and return in Explora. Press the switch with the push/pull icon to return home.

Egypt: The second time period you must visit. Remember to use the scroll. After the rematerialisation in Egypt go N, E, N, N. Look in the bush at the left of the entrance. Get the amulet. Examine scroll. USE the push/pull icon to push the rocks with the combination that is written on the scroll. The combination

is: top, top left, top right, top right. Go N, N. USE amulet on snakes. Go N,W. USE amulet to get to the sarcophagus chamber. USE the push/pull icon on the second, the third, the fourth and the fifth levers. Get the ring from the mummy. Close sarcophagus and get the piece of the punch card. Go down, then N. USE the turn icon on the second torch. Go down, S, S, W, S. Enter Explora and return to the chateau.

Prehistory: Make sure you can use your lighter for one more time. Go E. Get bone and grass. Then go E, NE. Get rock. USE grass on woods. Light lighter. USE lighter on woods. Get torrch. Go E, S. Look in skull. Get piece of card and return to Explora.

Maye: Find the three stones, then go W, W, W. Look horse. USE turn icon on statue. Get key. Go E, E, E, NE, NE, N, N, NW, NW, NE, E. USE gloves on bush. USE ring in hole. Wait until 13 00h. The beam will be reflected on the door. USE oone in door hole. Go up. USE key to unlock safe. Get punch card. Now you can make one punch card.

Alexis Kofteros - Nicosia, Cyprus.

VIEWPOINT

"I'm sure that the top software houses always realised from the start that no matter how much advertising hype was lavished upon their adventures their sales would never even come near to the latest arcade game conversion, so is the reason for the dis-continuation of Text-only adventures because Level 9's or Infocom's sales-graph isn't showing any profit margin? I always hoped that these companies were producing these games, knowing that even though they weren't selling in fantastic amounts they were giving the minority of adventurers immense pleasure, and I always looked forward to new releases on the adventure front. Perhaps I was wrong."

Stuart Meshell - Count Durham

World of Flight

St. Louis
Hawaii
Paris
Tokyo

JUST HOW WEIRD ARE YOU?

It goes without saying that you're pretty odd. After all, you wouldn't have a computer, or be reading ACE, if you weren't. But just lately we've been receiving a lot of mail from people who want to know just how weird they are. Some of you are just a little bit worried that ownership of a computer marks you with a shameful stigma; you suspect you may be a complete nerd, and you do not feel happy about it. Other readers positively revel in their strangeness, like hogs in filth, and simply wish to confirm that they are more peculiar than the next chap with a 68000 chip and a copy of Populous.

Now this specially commissioned ACE Questionnaire will let both sets of computer users discover their WQ (Weirdness Quotient). The higher your score, the crazier you are. And yes folks – one size fits all: depending on which of the two groups you belong to, you will either be reassured or worried to death.

HOW TO TAKE THE TEST

The ACE WQ Test is best taken after a prolonged spell of game-playing or, if this is inconvenient, after several hours of indiscriminate TV watching. Either of these activities should induce a suitably blank state of mind. If you can also arrange to eat large amounts of junk food beforehand, so much the better.

The WQ Test consists of 20 multiple-choice questions. Simply read the question and then answer it (truthfully) by selecting one of the choices. Note down your answers and then turn to page 102 to see what your score adds up to. Then read the appropriate psychological profile for the score you have achieved.

The whole test should take no more than 15 minutes, although other nerds may find it takes up to three hours.

THE QUESTIONS

1. For some reason or other you find yourself at a party rather than at home with your faithful computer. A pretty girl seems to be trying to pick you up. Do you
(a) Let yourself be picked up, but feel guilty about betraying your computer?
(b) Tell her to get lost because you've planned to finish your latest telecom game when you get home?
(c) Ask a friend what the hell she's after?

2. You are engrossed in a lengthy session of Tetris when your mother bursts into your room screaming that the house is on fire. Do you
(a) Say 'OK, I'll be down when I've finished this level'?
(b) Carry on playing regardless?
(c) Try to escape but not before saving your computer and entire games collection first?

3. After several years of non-stop games playing your computer decides to give up and explodes violently. Do you
(a) Break down in a flood of uncontrollable grief?
(b) Not notice that anything is wrong?
(c) Shed a few tears – then borrow your father's credit card and buy a better model?

4. Your come home one day to discover that your younger brother has 'accidentally' wiped all your discs. Do you
(a) Kill him?
(b) Torture him horribly, and then kill him?
(c) Not notice that anything is wrong?

5. Your girlfriend decides enough is enough and tells you that either the computer goes, or she does. Do you;
(a) Not notice that anything is wrong?
(b) Pass her a tissue and ask her if she wouldn't mind popping out for a couple of blank disks before she goes?
(c) Beg her not to go, and resort to surreptitious games at three o'clock in the morning?

6. Your doctor tells you that if you don't stop playing games you will go blind. Do you
(a) Try to cut down to two packages a week?
(b) Ignore him, but pull in an advance order for a guide dog just in case?
(c) Wonder where the voice is coming from?

7. Your parents force you to go on a fortnight's cruise with them, leaving your computer behind. Do you
(a) Slip overboard when they're not looking and swim back?
(b) Smuggle your computer and entire games collection through customs by disguising it all as a packed lunch?
(c) Agree to go but spend the whole holiday playing the arcade machines on board ship?

8. Ace reveals exclusive details of Sir Clive Sinclair's latest invention: a supercharged C5 equipped with an on-board ZX81. Do you
(a) Break down in a fit of uncontrollable laughter?
(b) Wonder if it will ruin your whole collection of games?
(c) Rush out immediately and buy one?

9. Your friend invites you round to show you how he has managed to forecast global economic trends for the next fifty years on his 80386 PC using his home-grown financial program. Do you
(a) Try hard to stay awake, but fail?
(b) Think how lucky you are to have such an incredibly brilliant friend?

(c) Go home and try to write a better program on your Dragon 64?

10. Your father approaches you about the horrendously expensive items of computer equipment listed on his Access bill. Do you
(a) Try to get him hooked on games so that you don't have to send it all back?
(b) Tell him it's all essential for your Serbo-Croat GCSE?

(c)
Eat
all the
Access bills
before he gets them?

11. Your mother goes on a computer awareness course and begins using her machine to produce knitting patterns. Do you
(a) Deliberately infect all her disks with the nastiest virus you can get your hands on?
(b) Charge her by the hour?
(c) Wonder why your latest efforts on Deluxe Paint III all look like Fair Isle sweaters?

12. Faced with the choice between buying the latest version of your favourite programming language and part 3 of your latest game, do you
(a) Buy the game?
(b) buy the language?
(c) Not applicable because you'd never in a million years have such a thing as a 'favourite programming language?

13. Your mother complains that there are 'bugs' in your bedroom. Do you
(a) Promise to tidy up soon?
(b) Reach for the machine code monitor and get hacking?
(c) Ask if she knows just whereabouts in the program they are?

14.A Macintosh is
(a) A desirable computer?
(b) A quaint word (or a raincoat?

(c) An apple?

15. Your ideal summer holiday is
(a) Two weeks of sun, sea, sand and...
(b) One week of sun, sea sand etc. and one week of intensive Populous
(c) Two weeks of intensive Populous

16. Which of the following figures do you consider to have had the most influence on the development of civilisation (as we know it)?
(a) Aristotle
(b) Turing
(c) Jeff Minter

17. Which of the following statements most closely describes your feelings about computers?
(a) "I adore them"
(b) "I really like them"

(c) "They're OK"

18. When someone starts talking to you about blitters, sprites and screen refresh rates, do your eyes
(a) Light up with enthusiasm?
(b) Glaze over with boredom?
(c) Close?

19. When hand-held consoles become available in the shops, will you
(a) Ignore them until they are really cheap?
(b) Buy one immediately, whatever the price?
(c) Persuade a friend to buy one, whatever the price?

20. "Pong" is
(a) A nasty smell
(b) One of the first and still one of the greatest video games
(c) An archaic video game

THE SCORES

1.
(a) 1 This is a thoroughly normal reaction.
(b) 3. Pretty odd. We know Infocom games are good, but. ..
(c) 5. Totally weird.

2.
(a) 3. Some things are more important than mere fires
(b) 5 But you can take things too far.
(c) 1. Very normal

3.
(a) 5. It's only a computer, after all
(b) 1. A bit too normal – and heartless
(c) 3. Great, yes – but let's keep it in proportion.

4.
(a) 3. Let the punishment fit the crime
(b) 5 Very sadistic, very weird.
(c) 1. Appallingly normal.

5.
(a) 5. Strange as strange can be
(b) 3 You callous, self-centred creep...
(c) 1 It's hard keeping a balance between love and computers

6.
(a) 1. Eyesight is a precious gift – and it comes in handy for shoot-em-ups
(b) 3. A sensible precaution.
(c) 5. You've had it

7.
(a) 5. But can you swim?
(b) 3. The best of both worlds
(c) 1 A perfectly understandable stratagem.

8.
(a) 1. You can still see C5s in certain parts of North London.
(b) 3. You'll get over it
(c) 5. Stark, staring bonkers.

9.
(a) 1. No, your type wouldn't be interested
(b) 3 Admiration is only natural
(c) 5. But emulation is lunacy.

10.
(a) 3. Nice try
(b) 1. It might just work
(c) 5. You won't get much credit for that

11.
(a) 5 Nuts and nasty.
(b) 1 The profit-motive is exceedingly ordi-

nary.
(c) 3 Knit one, pearl one.

12.
(a) 3. Mildly strange.
(b) 5. Very strange.
(c) 1. Ordinary

13.
(a) 1. Very literal-minded interpretation
(b) 3 Not a minute to waste. .
(c) 5. Completely out of touch with reality.

14.
(a) 5. You know what you want.
(b) 1. Kinky
(c) 3 But is it edible?

15.
(a) 1 Just like (nearly) everyone else
(b) 3 Almost 'normal' .
(c) 5. Utterly gaga.

16.
(a) 1. Greece – cradle of civilization, etc.
(b) 3 You could make out a case for two
(c) 5. Clearly the right answer.

17.
(a) 5 A bit excessive
(b) 3. A strong bond of affection exists.
(c) 1. Neither hot nor cold.

18.
(a) 5. Are you kidding?
(b) 3. Even enthusiasts can only stand so much
(c) 1 Research shows that 98% of the population reacts in this way

19.
(a) 1. Cheapskate
(b) 5 Money's no object when you're in the grip of a great obsession
(c) 3. You're keen – but not that keen

20.
(a) 1. Where've you been for the past 15 years?
(b) 5 A lie
(c) 3. Indifference.

YOUR WEIRDNESS RATING

0-35 You are abnormally 'normal'. You seem to have no interest whatsoever in computers or computer entertainment. Take out a subscription to ACE and try harder

35-50 Computers are of great interest to you, but they do not yet dominate your life. You are what our resident ACE psychologist would call a 'well-adjusted personality' – solid, dependable, perhaps just a trifle on the dull side...

50-75 You are well on the way to weirdness. Your computer and its software are of great importance to you, although you still remember to brush your teeth and change your socks once a week Gradually you will lose your old 'normal' habits and move on to the stage where...

75-100 You are totally and utterly obsessed by the computer. Nothing can compare with the joy and the response your trusty machine and your favourite games can supply Social intercourse is of no interest to you, unless it is related to the microchip. you would mug your granny if you needed to raise the cash for a new piece of software. You are weird – but whether that bothers you is another matter altogether; as our psychologist says, "Weirdness is in the monitor of the beholder!'

CYBERSPACE

S imon Hodson turns his head to survey the small room, and, walking to the opposite corner, picks up a chair and replaces it a good five feet from its original position. However mundane it may appear, this simple action could be one giant leap for the gamesplaying mankind as neither the room nor the chair actually exist, they're nothing more than computer-generated images in a three dimensional 'virtual reality'.

This is not science fiction, it's not even early theoretical research for some far-fetched experiment which may show results in the distant future – Simon Hodson is marketing manager of Autodesk Inc, and the system which allows him to disappear into a world inside his computer is already up and running. Its name? Cyberspace

Initially developed as a way to manipulate robots in dangerous situations by remote control, Cyberspace is now on the verge of becoming a commercially viable reality for users of Computer Aided Design (CAD) systems

Cyberspace uses customised software to generate a 'real' 3D environment. This in itself is nothing new as CAD packages have always carried out this basic function, allowing designers to view their creations from all angles without going to the expense of building a prototype. Where Cyberspace differs is in the unconventional hardware interface, which when donned by the user actually allows entry inside the computer-generated image

Help! I'm about to be crushed by a giant pink polygon!

Simon Hodson reaches out into an invisible world

THE HARDWARE
The hardware consists mainly of a bulky 'helmet' (nicknamed 'Autospex') which incorporates

two high definition LCDs, projecting a stereoscopic image to each eye (in a similar fashion to the crude red and green glasses used to view '3D' movies). Also mounted in this contraption is a tracking device which correlates head movement with the displayed image, allowing the user to see and scan a field of vision as exists in the real world

Movement within the newly created environment could be achieved by simply walking about, but this would cause problems if the computer-generated image was larger than the user's actual environment (what looks like a door in Cyberspace could actually be a solid wall in real life – ouch!). This problem is overcome by the second piece of hardware – The Orb. As the name suggests, this is a spherical contraption which is used to 'move' the environment: rotate the orb forward and objects will appear to move away and so on.

But for complete interaction, the user needs to be able to manipulate any objects within the new world with his or her own hands, and this is where the final piece of hardware – The Dataglove – comes into its own. Perhaps the most innovative invention of the lot, this glove is electronically con-

nected to the rest of the hardware and allows a computer-generated image of the users hand to precisely mimic the movements of the real thing. Unfortunately the system is currently confined to using a single glove, as attempts at linking up a second have so far ended in failure.
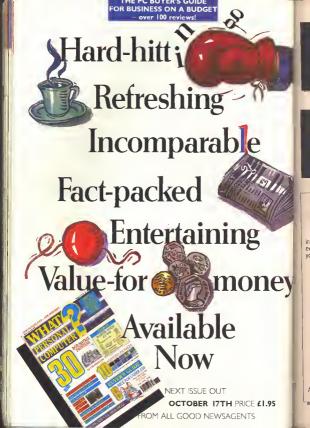
Perhaps the most extraordinary thing about Cyberspace however is the cost of research so far; the Autodesk team in Sausalito, California has so far only laid out a paltry $26,000 on hardware, mainly because of the company's policy of developing systems for existing computers (mainly IBM-compatibles)

This relatively low cost is an encouraging sign for those who would like to see the Cyberspace technology incorporated into future games machines – and Simon Hodson is quick to point out the system's suitability for adventure style games in particular.

Imagine a Falcon dogfight played out 'inside' a three-dimensional cockpit above a solid landscape, or even running onto a full-sized Kick Off football pitch with 10 computerised teammates. Scenes like these may still be some way off, but Autodesk's research team is bringing them closer all the time

Who knows? Someday soon you may never have to enter the 'real' world again . . .

SUBSCRIBE!

Oops! This issue was so packed with goodies that we had to elbow the subs form onto page 127!

IN THE PINK

THE LINE-UP

GAMES YOU'VE GOT TO HAVE

● All of the following games are ACE RATED: that means they're all red hot masterpieces of computer entertainment. Some of the games have been around a long time: these games are simply marked with the ACE CLASSIC flash, and rest assured, they're all superb pieces of software and are well deserving of the title.

ARCADE STYLE

Including coin-op conversions. Games with a high fun factor and plenty of addictiveness feature here.

ARKANOID

Imagine ● Spectrum
£7.95cs ● C64 £8.95cs
£12.95dk ● Amstrad
£8.95cs £14.95dk ●
Atari XL/XE £8.95cs ●
MSX £8.95cs ● IBM PC
£19.95dk

Conversion from Arkanoid the coin-op, in its turn the best version of the classic Breakout. Simple in concept: the player controls a bat at the base of the screen, whizzing it left and right. The object is to keep a small ball in play, bouncing it off the bat to destroy formations of bricks in the top half of the screen. Eliminate all the bricks and move on to the next of 33 screens. Clever extra features contribute to the addictiveness. As a

faithful coin-op conversion Arkanoid comes out top, but for a different slant on the same theme and some nifty music, try ASL's Impact, which also builds up the difficulty levels more gradually
● ACE CLASSIC

BOUNDER

Gremlin Graphics ●
Spectrum £7.95cs ● C64
£9.95cs £12.95dk ●
Amstrad £9.95cs ●
£13.95dk

A great arcade bounce-em-up, and very addictive too. You guide a ball as it bounces from one platform to another, high above the vertically scrolling landscape. Land correctly through 100 maze-and-platform screens, falling off the tiles by encapsulating them in your bubbles to turn them

into juicy fruit. More firepower and various bonuses await as you reach the more difficult bonus screens. Enormously good fun, if a little on the cutesy side. Can also be played as one player against the computer.
● ACE RATED 968

CDNQUEROR

Superior ● Archimedes
£27.95cs (Amiga and ST versions under development)

Drive around in your very own tank! Blast the enemy forces in close combat and plan your strategy for the campaign. This is a tricky game to get to grips with, but if you persevere you'll find you soon become mesmerised by the thing. If you ain't got a 16th Archie though – forget it!
● ACE RATED 913

ELIMINATOR

Hewson ● Spectrum
£7.99cs £9.99dk ●
C64 £9.99cs £14.99dk ●
Amstrad £9.99cs ● ST
£19.99dk ● Amiga
£19.99dk

Graphically wonderful roadway blast-em-up by John Phillips, which will twist your joystick loose-

out. It'll even have you driving on the ceiling! Though it's tough to get to grips with at first, the addiction level's so great you'll keep coming back for more.
● ACE RATED 904

EXDLDN

Hewson ● Spectrum
£7.95cs ● C64 £8.95cs
£12.95dk ● Amstrad
£8.95cs £14.95dk

Graphically superb horizontally scrolling shoot-em-up in which you run, duck and jump your way along a planet's surface blasting away at alien defences. A gun and a missile launcher are used to blast the foes, but if things are still too tough then you can grab an exoskeleton for extra protection and fire power
● ACE CLASSIC

NEW ZEALAND STORY

Ocean ● Spectrum
£8.95cs, C64 £9.95cs,
Amstrad £9.95cs, ST
£19.99, Amiga £24.99

Although capped at the post in a hand to hand with Rainbow Islands, New Zealand Story is not a game to be ruled out. It is immense fun to play provides lots of varied action across army levels. Definitely worth checking out.
● ACE RATED 875

DIDS

Mirrorsoft ● Atari ST
£19.99dk

A magnificent Thrustish blast. The Dids are relying on you to save them but the Discretes aren't going to let them go without throwing missiles, rockets and a number of other weapons at you. Included with the program is an edit facility that allows you to design you own planetoids – great stuff!
● ACE RATED 969

PITSTOP 2

Epyx/US Gold ● Available only on Epyx Epics compilation ● C64
£9.99cs £14.99dk ● IBM
PC £39.95dk
(in compilation with Winter Games and

Summer Games 2)

Thrilling racing game where the screen is split into two and you can race the computer or a friend for different of Grand Prix circuits, tyre blow-outs and of course the all important pit-stops guaranteed to give you hand cramp and your brain a real racing treat
● ACE CLASSIC

POWERDROME

Electronic Arts ● Atari ST
£24.95dk

This superb arcade-style futuristic driving simulation will have you enthralled for months to come. It may not be terribly easy to get straight into but it's well worth persevering with. You'll be playing this for months.
● ACE RATED 826

PURPLE SATURN DAY

Exxos ● Atari ST
£24.95dk ● Amiga
£24.95

A terrific mix of games that delivers punch both audio and visual. The consistently good gameplay ensures you'll enjoy playing each sub game time and again. It's a little tricky to get the hang off, but master it and you'll be pleased you persevered
● ACE RATED 912

RAINBOW ISLANDS

Firebird, Spectrum
£9.95cs £14.95dk, C64
£9.95cs £14.99dk,
Amstrad £9.95cs
£14.99dk £17.99dk,
Amiga £24.99

The sequel to Bubble Bobble is nothing short of fantastic. The graphics and sound are superb, as is the gameplay. One of the best (and cutest) arcade conversions of the year it should not be missed.
● ACE RATED 934

RVF

Microstyle, ST £24.99,
Amiga £29.99

RVF offers a near endless

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● ACE...

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Electro...
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● ACE...

supply of first paced pole action as you race your Honda RVF. Attention to detail is paid out all along the route with your rider giving the bike a push start after a crash. An excellent mix of arcade and simulation.
★ ACE RATED £15

SPIDER TRONIC

Ere International ● Atari ST £19.95dk

Guide your spider-like character around the game area, collecting coloured panels in the correct order. The built-in construction set means you'll be knocking out your own levels till the cows come home.
★ ACE RATED 903

SUMMER GAMES

Epyx/US Gold ● C64 £9.95 ● £14.95dk ● IBM PC £29.95dk

Epyx sporting simulations are of high quality but none have quite captured the playability and style of the original Summer Games and its immediate successor, Summer Games 2. One to six players can take part in high jump, gymnastics, springboard diving, clay pigeon shooting, swimming, pole vault – and others – with lovely large graphics and smooth animation throughout. Control of your athlete can be complex so practice is recommended.
★ ACE CLASSIC

SUPER SPRINT

Electric Dreams ● C64 £9.99 ● Spectrum £8.99 ● Amstrad £9.99 ● Spectrum £9.99 ● Atari ST £19.99dk

One of the better coin-op conversions currently available. With up to three players all competing at once, the action is fast and furious and it will take a fiery-brand car to complete some of the more tortuous circuits that appear later in the game.
★ ACE RATED 907

THRUST

Firebird ● Spectrum £1.99cs ● C64 £1.99cs ● Amstrad £1.99cs

Terrifyingly sensitive controls and a large helping of terrible physics make this budget title an absolute must. Fying down through the caverns of an enemy-held planet, you have to pick up fuel and destroy hostile gun turrets without crashing into the tunnel walls. Tough enough as it is, but then you've got to make the return journey with a heavy load slung under your craft. Very mean very addictive
★ ACE CLASSIC

URIDIUM

Hewson ● Spectrum £8.95cs ● C64 £9.95cs £12.95dk ● BBC £9.95cs £14.95dk

The piece de resistance of scrolling shoot-em-ups: blast the dreadnought and attacking ships while dodging around any large structures. Great metallic-looking dreadnoughts and the smoothest scrolling you'll ever see but the head and shoulders above the opposition. A grass roots game, especially now that C64 versions come packaged with the excellent Paradroid.
★ ACE CLASSIC

ZARCH / VIRUS

Superior Software ● Archimedes £19.95dk ● Firebird (16 and 8-bit versions) Amiga £19.99dk ● Atari ST £19.99dk ● Some 8-bit versions under development

SBE ACE's highest rated game to date. A solid three dimensional shoot-em-up with such graphic perfection and timelessly addictive gameplay that it became an instant classic. Now the 16-bit versions have arrived and they're just as good as the 32-bit versions. All that remains to be seen now is whether we'll be ACE rating the 8-bit versions.
★ ACE RATED 981

ADVENTURES

Adventures have come a long way since The Hobbit. State-of-the-art graphics and powerful parsers enable you to communicate with other characters, and fully explore the world of your choosing.

BEYOND ZORK

Infocom/Activision ● C64 £19.99dk ● PC £24.99dk ● Amiga £24.99dk ● Atari ST £24.99dk

Infocom's attempt to muscle in on the role-playing market is a great success. Locate the fabulous Coconut of Quendor in a game that combines the wit and ingenuity of one of the world's most original software companies with state-of-the-art parsing and gameplay. Text-only, but with an on-screen mapping facility.
★ ACE RATED 902

CORRUPTION

Rainbird ● Atari ST £24.95dk ● Amiga £24.95dk ● PC £24.95dk ● Spectrum £15.95dk ● C64 £17.95dk ● Amstrad 6128 £19.95dk

The tale of insider dealings, infidelity and crooked business deals is unlikely to appeal to adventurers who prefer to wander through vast dungeon networks seeking treasure. But for those who are fed up with traditional adventuring, it's like a breath of fresh air. Superb graphics, great atmosphere and a real-time plot makes this a terrific game that grips from the start.
★ ACE RATED 920

FISH

Magnetic Scrolls ● PC £24.99dk, Amiga £24.99dk

More gameplay than Corruption, better game design than Jinxter, and

not as saucy as The Pawn. This is definitely MS's best release since Guild Of Thieves. Good stuff indeed
★ ACE RATED

GUILD OF THIEVES

Rainbird ● C64 £19.95dk ● Spectrum £15.95dk ● Amstrad 6128 £19.95dk ● Amiga £24.99dk ● Atari ST £24.99dk ● PC £24.95dk

One of Britain's newer adventure software houses – Magnetic Scrolls – managed to produce a traditional treasure hunt with superb graphics and some very tricky puzzles. Powerful parser helps to create a convincing game world with humour and imagination.
★ ACE CLASSIC

INGRID'S BACK

Level 9 ● Atari ST £19.95dk

A great follow-up to Gnome Ranger. Level 9 have really got to grips with the use of characters in their games and how to program them very effectively
★ ACE RATED 929

JEWELS OF DARKNESS

Rainbird ● C64 £14.95cs ● Spectrum £19.95cs £14.95cs ● Amstrad £14.95cs ● £19.95dk ● PC £19.95dk ● Amiga £19.95dk ● Atari ST £19.95dk

Level 9 have put together three of their classic releases Colossal Adventure, Dungeon Adventure and Adventure Quest in one bundle. The

games have been updated with graphics and bigger vocabularies and are as close to the original spirit of adventuring as you're likely to find.
★ ACE CLASSIC

LURKING HORROR

Infocom/Mediagenic ● C64 £19.99dk ● ST £24.99 ! Amiga £24.99 ● PC £24.99

Infocom's tribute to H.P Lovecraft and the horror fantasy genre sends you into a cold sweat as you discover something very nasty lurking beneath your college library. Superb text-only game that defies you to play it after dark...
★ ACE CLASSIC

TIME AND MAGIK

Mandarin ● Spectrum £14.95cs £14.95dk ● C64 £14.95cs £14.95dk ● Amstrad £14.95cs

This compilation of the Lords of Jewes, Lords Of Time, Red Moon and The Price Of Magik have been revamped with better parsing, bigger vocabularies and pictures added. Superb value if you don't already own them
★ ACE RATED 918

ZORK ZERO

Infocom Versions due out about now. Watch this space for price info. Highly enjoyable with a variety of challenges that make for instant addiction. A lot more character interaction would have made this a real humdinger, but even so it remains one of the best games of the year so far
★ ACE RATED

PUZZLES

If you're after a game that will provide you with a real challenge, without necessarily requiring a large dose of strategic thinking, then it's a puzzle game you want.

BONE CRUNCHER

Superior Software ● C64 £9.95cs11.95dk ● Amiga £14.95

At first sight this recent release may appear to be nothing more than a boulderdash ripoff However there are a number of innovative gameplay features which give Bonecruncher a feel all of its own. Highly recommended for those who prefer to solve problems rather than shoot them
★ ACE RATED 946 – AMIGA

BOULDER DASH

Prism Leisure Corporation ● Spectrum £2.99cs ●

● C64 £2.99dk ● Amstrad £2.99cs

A game that has everything – instant addiction, log-term challenge, frantic excitement as the clock ticks down and extremely tricky puzzles. You must collect jewels hidden in caverns, digging away earth and boulders to get tat them. Boulders can drop and cause you serious damage, while the jewels are often hidden by seemingly unpenetrable walls. Complex but great fun. Boulderdash is a classic you can't afford to miss in its budget incarnation.
★ ACE CLASSIC

DEFLEKTOR

Gremlin/Vortex ● C64

£9.99cs ● Spectrum
£7.99cs ● ST £19 95dk

Optics are the order of the
day here.Knot the spirit
disoriented as the player
tries to connect a laser
beam to a receiver and at
the same time destroy a
number of cells that are
on screen as well. You'll
need to make full use of
the mirrors, fibre-optic
conduits and polarising
and refracting blocks if
you're to observe your
aim. Clear the first screen
and you'll only have 59
more to do. Fascinating

★ ACE RATED 906 —
ST

NEBULUS
Hewson ● C64 £9.99cs
£14.99 dk ● Atari ST
£14.99 dk

Guide pogo to the top of
eight towers using the
spiral of platforms, lifts
and ledges that form the
route. It's a highly original
game that strikes a fine
balance between
frustration and addiction,
added to which is the
rotary scroll, this making
it a good-looking, playable
winner of a prize.

★ ACE RATED 943 —
C64

SENTINEL
Firebird ● Spectrum £9.95
cs ● C64 £9.95cs
£14.95dk ● Amstrad
£9.95cs £14.95 dk ●
Atari ST £19 95dk ●
Amiga £19.99dk

Bizarre and compelling
strategy game played over
the chequered surface of
a planet dominated by the
Sentinel. Fundamentally
you have to absorb energy
while trying to stop the
Sentinel from absorbing
yours. A clean brain and
fast trigger finger are both
necessary in this very
original and large. 10,000
possible landscapes
game.

★ ACE RATED 963 —
AMIGA

SKULLDIGGERY
Nexus ● Atari ST £19.95

Boulderdash clone that
completely outdoes the
original on this particular
machine. Again (see
Boulderdash above) you're
digging for diamonds in

caverns over a hundred
different screens - with a
time limit for each screen.
Skulldiggery scores on
playability.teaser screens
to begin with and a choice
of starting points and an
entertaining two-player
option.

★ ACE RATED 918 - ST

SPORE
Bulldog ● C64 £1.99cs ●
Amstrad £1.99cs ●
Spectrum £1.99cs

The working collection
of strategy, frenzied
blasting, and great
graphics make Spore a
worthy full-priced release
what a bargain then to be
able to pick it up for
£1.99!

★ ACE RATED 919 -
C64

TETRIS
Mirrorsoft ● Spectrum
£8.99 cs ● C64 £8.99cs
£12.99dk ● Amstrad
£8.99cs £12.99 dk ●
Atari ST £19.95dk ●
Amiga £19.99dk ● BBC ??
£19.99dk

A fascinating geometrical
oddity, this Russian
puzzler bares the obscure
mathematical topic of
packing into a cult game
One at a time, shapes fall
downwards into a
rectangular playing area
Left to their own devices
they'll pile up until they
reach the top of the
screen, your task is to
guide them down and pack
them tightly so that
doesn't happen. Different
versions have proved to
be rather versatile in their

arcade aspects, but the
brilliantly simple idea
behind them means they're
well worth a look whatever
your machine

★ ACE RATED 886 -
C64

THINK!
Firebird ● C64 £1.99cs ●
Amstrad £1.99cs ●
Spectrum £1.99cs

Originally released by
Arolasoft at full price, but
now available for a fraction
of that from Firebird,
A humbly addictive game
played on a 6x6 grid - by
one or two players - in
which you attempt to
connect four counters,
horizontally, vertically or
diagonally

★ ACE CLASSIC

XOR
Logotron ● BBC £9.95cs
£12.95dk ● Amstrad
£9.95cs £14.95dk●
Spectrum £7.95cs

Very tricky maze game
evolving the player
controlling two shields,
and collecting masks
through 15 mazes which
increase in complexity as
you progress. Also in later
stages, fish and chickens
lie in wait, other blocking
the mazes and just waiting
to fall on you and bring
your quest to a premature
end. Later still, the fish
and chickens are the least
of your worries as bombs,
transporters and dolls
crop up to compare
against you. This one
requires real planning

★ ACE RATED 963

SPECIALS

The weird, the wacky, the
wonderful, the simply unclassifiable
– they're all here. from These games
are well worth looking at, simply
because it's here you're likely to
find programs with heaps of
originality.

ATF
Digital Integration ● C64
£8.95cs £12.95dk ●
Amstrad £8.95cs
£12.95dk● Spectrum
£8.95cs £13.95dk

Excellent combat/flight
simulator that's a bit of a
change for Digital
Integration the simulation
specialist. The emphasis is
an solid action, the result

being a sure-fire buy.
★ ACE RATED 856 -
SPECTRUM

DARK SIDE

Incentive ● C64 £8.95cs
£14.95dk ● Amstrad
£9.95cs £14.95dkw
Spectrum £9.95cs
£14.95dk

The second game using the Freescape
programming system,
which sets more of an
arcade challenge, the 3D
graphics are again superb
as are the tasks and
puzzles.
★ ACE RATED 915 -
AMSTRAD

ELITE

Firebird ● C64 £14.95cs
£17.95dk ● Amstrad
£12.95cs £14.95dkw
Spectrum £14.95cs ● BBC
£13.95cs £14.95dk
(available from Superior
software)

Still the best space trading
game, Elite set a standard
for other companies to
follow. One of the first
space games to use vector
graphics, it's a shooting
and trading effort set
across several galaxies,
with plenty of variety to the
game play. You can trade
legal goods or (relatively)
safe systems, or run the
gauntlet of pirates in the
galaxies' danger spots with
your hold full of
contraband. Either way
there's a race line in zero-G
dogfighting, and as big a
task as you'll find
anywhere.
★ ACE CLASSIC

INCREDIBLE
SHRINKING
SPHERE

Electric Dreams ● C64
£8.99cs £14.95dk ●
Amstrad £9.99cs
£14.99dk ● Spectrum
£9.99cs £14.99dk ● Atari
ST £24.99dk ● Amiga
£24.99dk

A manic maze world where
music size and aerho
contrive to provide wicked
gameplay. Tricky puzzles
and endless nasty
obstacles will have you
rolling around in delight.
★ ACE RATED 923 -
C64

MAGNATRON

winter You've got a large
tasks to complete and
there's plenty of Epyon to
destroy, making this
combination of strategy and
exploration that stands
head above the
competition.
★ ACE RATED 927 - ST

TAU CETI/
ACADEMY

CRL ● C64 £9.95cs
£14.95dk ● Amstrad
£9.95cs £14.95dk ● Atari
ST £19.99dk ● Amiga
£19.95

Flight simulator/shoot 'em
up and its sequel which are
both incredibly smooth and
well put together. The
attention to detail is
impeccable as you set off
on hair-raising missions as
a space trader. In Academy
you get to design your own
space skimmer craft as
well.
★ ACE CLASSIC

TOTAL
ECLIPSE

Incentive ● C64 £9.95cs
£12.95dk ● Amstrad
£9.95cs £12.95dk ●
Spectrum £9.95cs
£14.95dk

The third game using the
Freescape system is a bit
of a departure from the
first two, but it's still an
incredible game. In total
eclipse you're battling
against time back in the
1930's trying to prevent
the moon exploding. For
arcade adventurers who
love puzzles, the
Freescape system is a
great one.
★ ACE RATED 907 -
AMSTRAD

WIZBALL

OCEAN ● C64 £9.95cs
£14.95dk ● Amstrad
£8.95cs £12.95dk ●
Spectrum £8.95cs
£14.95dk

A competing and original
ball game in which you
become Wizball and must
set out to conquer the
colour schemes which are
intent on eliminating the
spectrum and rendering the
landscape grey and drab.
Controlling the Wizball is
great fun and makes this
one of the most playable
games to have appeared
for a long time

RPG

Enter the world ot fantasy Role
Playing Games with this lot — be
prepared to play for a long time;
these games are addictive..

THE BARD'S
TALE II

Electronic Arts, C64
£16.95, Amiga £24.95dk

The highly successful
predecessor to Bards Tale
II. BT II has the advantage
of being slightly easier to
advance. The Amiga
version features some
very nice swished mask
chants when you enter a
temple and excellently
coloured graphics. And of
course, you can update
your favourite characters,
their attributes and
equipment for use in BT III.
★ ACE RATED 920

THE BARD'S
TALE III

Electronic Arts ● C64
£14.95dk

The latest Bard's Tale
game offers a number of
refinements over its
predecessors but of
which are still well worth
taking a good look at)
First, the graphics are
better animated.
Second, there are
ranged combat routines
which take careful
account of the distance
between you and your
opponents. Finally, the
game's larger and
represents excellent
value for money
★ ACE RATED 926

BATTLETECH

Infocom, PC £29.95, ST

Battletech features some
incredible cartoon
sequences, arcade style
action, role play and
strategy. In short a
complete, full game. A
brilliant RPG purchase
even though it missed
out on an Ace rating.
★ ACE RATED 801

DUNGEDN
MASTER

Electronic Arts ● C64
£14.95dk

Quoted as being a
'milestone in Advanced
Computer
Entertainment', Dungeon
Master offers 14 levels,
loads of quests,
atmospheric graphics
and sound. All going to
make Dungeon Master
one of the best
roleplaying adventures to
have appeared on any
machine
★ ACE RATED 920

POOL DF
RADIANCE

US GOLD /SSI
C64 £14.99dk

SSI never truly brave to
attempt to capture the
complexity of the
AD&D system on a
computer, but they

managed superbly. An
RPG-influenced game that
will appeal to not only
AD&D fans but to anyone
looking for an enthralling
game that will keep them
playing for months
★ ACE RATED 921

ULTIMA V

OriginSystems/Microprose
● C64 £24.95dk ● PC
£29.95 ● ST/Amiga to be
announced

Astonishing level of detail
in the roleplaying
influenced epic Travel
round Britannia trashing
the opposition and earning
the magical, tactical, and
geographical secrets that
will enable you to defeat
the forces of evil far
underground. Superb
roomp, great lasting
interest, and tough
challenges galore.
★ ACE RATED 929

WASTELAND

Electronic Arts ● C64
£14.95dk

Change around mutated
USA whopping mutant
bunnies and biker scum in
the roleplaying epic. The
atmosphere may not be
as good as the Bard's
Tale series of games, but
the extra dimensional
strategy leaves the cut,
slash and spell scenario of
the BT series way behind
★ ACE RATED 930

BRAIN GAMES

When you want some real
stimulation, you reach for the games
that really make you think: here's
the best ot the bunch

CHESS
MASTER 2000

Electronic Arts ● C64
£9.95cs £14.95dk ●
Amiga £24.95dk ● Atari
ST £24.95dk ● IBM PC
£24.95dk

Strongest chess game on
the Amiga, with excellent
graphics, 2D or 3D
viewpoint, 12 levels of

difficulty and all the
playing options you could
wish for. Plus some fairly
nifty speech synthesis.
★ ACE CLASSIC

COLOSSUS
CNESS 4

CDS ● C64 £9.95cs
£14.95dk ● Amstrad
£9.95cs £14.95dkw
Spectrum £9.95

Firebird ● C64 £8.95cs
£12.95dk ● Spectrum
£8.95cs £12.95dk

Puzzles and action Steve
Turner style. Save the
world by dismantling eight
satellites. Steal parts from
enemy droids to augment
your own droid and
hopefully make your job a
little easier.
★ ACE RATED 904 - ST

QUEDEX

Thalamus ● C64 £9.95cs
£14.95dk

In this impressively
challenging game you must
steer a metallic ball through
ten different screens of
mazes, bonuses and
obstacles, all within a set
time limit. This simple
game concept has a host
of added features to make
it particularly pleasing; you
can carry over unused time
to the next screen, for
example, and tackle the
different screens or
planets in any order you
wish. Excellent graphics
and utterly absorbing play.
★ ACE RATED 934 - C64

SPINDIZZY

Electric Dreams ● C64
£9.95cs £14.95dk ●
Spectrum £5.95cs ●
Amstrad £9.95cs £14.95
Disk

Tremendous stuff, steer
your spinning top over
tough obstacles and collect
jewels, against a fiendish
time limit. The game
landscape is a vast system
of catwalks, ramps, towers
and trampolines
surrounded by lethal drops
- and NO safety rails. Floor
switches activate lifts and
bridge gaps, but tripping
them in the right order can
be harder than it looks. A
few bad guys mill a lot of
nice touches, but the
explorations the thing.
★ ACE CLASSIC

STARGLIDER
II

Rainbird ● Atari ST
£24.95dk ● Amiga
£24.99dk

One of the finest examples
of a game using vector
graphics to the full
advantage, gets the solid
3D treatment and comes
out looking every bit a

Best bet for 8-bit machine owners, with a choice of 20 or 30 view, umpteen levels of difficulty, and a myriad options which enable you to play, watch, work out chess problems, etc against a fine computer opponent.
★ ACE CLASSIC

COLOSSUS MAH JONG
CDS ● C64 £9.95cs
£14.99dk ● Amstrad £14.99dk ● Amiga £19.95dk
Rummy-like oriental game of strategy and chance. A tutor program and a short manual make this an easy to use and highly entertaining piece of software for veterans and novices alike
★ ACE RATED 937 – C64

INFOGRAMES' BRIDGE
Infogrames ● Amstrad £12.95cs £15.95dk ● MSX £12.95

Graphically the best of all contract bridge simulations, with large

playing cards depicted against a suitably green baize background. Plays a good game for a computer, which after all is a bit short in the imagination and the intuition departments, and features a wide range of options and bidding conventions which you can toggle of according to your style.
★ ACE CLASSIC

POWERPLAY
Arcana ● C64 £8.95cs
£14.95dk ● Amstrad £8.95cs £14.95dk ● Amiga £19.95dk ● Atari ST £19.95dk

If you want to try out your general knowledge, we reckon you'd be better off with this original and challenging combination of strategy game and quiz with them the admittedly monster selling Trivial Pursuits. Powerplay is graphically very pretty in its setting on Mount Olympus, home of the Gods
★ ACE CLASSIC – Amiga

SCRABBLE
Leisure Genius ● C64 £12.95cs £14.95dk ● Amstrad £9.95cs £14.95 ● IBM PC £24.95dk

The hugely popular word game translated very successfully onto the micro. Fast, excellent display, and a surprisingly large vocabulary (even if it does include some strange words) which go down even strong human opponents a tough game at the higher levels.
★ ACE CLASSIC

BATTLESHIPS
Electronic Arts ● Amiga £8.95cs, ST £9.95cs

Just the job if you don't want the demands of real chess: design your own pieces, listen to the music – and then toss the game! It's a sort of laid-back Yuppy board game which could have only originated in the land of the Jacuzzi, California

WAR GAMES

Fancy yourself as a master of grand strategy, marshalling hordes of troops and sending them off to do battle on your behalf? Look no further than the ACE selection of war games.

ARHHEM
CCS, Spectrum £8.95cs, Amstrad £9.95cs, C64 £9.95cs

Arnhem was easily the best in the field. It has all the expected atmosphere, five separate scenarios and one of the toughest computer opponents you could ever wish to meet. A thoroughly absorbing wargame which can be classed as one of the old masters
★ ACE RATED 910

CONFLICT EUROPE
Mirrorsoft, ST £24.99

Amiga £24.99, PC TBA

The 16 bit progression of Theatre Europe. Conflict Europe featured lots of extra graphical and sound effects. The computer controlled intelligence was marginally sophisticated but still enough to give a challenging game. The correct balance between strategy and excitement throughout. Great for beginners and intermediate players
★ ACE RATED 882

THEATRE EUROPE
PSS, Spectrum £9.95cs,

C64 £9.95cs £14.95dk, Amstrad £9.95cs £14.95dk

The perfect game for 8 bit owners who go green with envy when they look at Conflict Europe. Theatre Europe is the forerunner to the excellent 16 bit game The graphics and overall play are not as sophisticated, but it is still one heck of a game
★ ACE RATED 818

UMS
Rainbird, ST £24.95, PC £24.95, Macintosh £34.95, Amiga £24.95

Probably the greatest war game to date: UMS' unique 3D systems enables the creation of almost any battle in history. As well as a very sophisticated computer opponents yet. On top of this are add on scenarios from the Vietnam war and Gettysburg, plus many others in the pipeline. And if that's not enough it contains a very neat construction kit to keep you going for even longer. An essential purchase
★ ACE RATED 907

SHINY, SHINY LEATHER!

Rainbow Arts are giving you the chance to w3in a pair of real Texan Oil Baron cowboy boots

Yesssreel. With an Ace Rating of way over 800, Rainbow Arts' latest game *Oil Imperium* has rightly received a great deal of fantastic praisal (says our reporter Simon Harvey). Now we've been offered a pair of gen-u-ine shiny black leather Texan boots to give away to the winning would-be oil baron in this fabulous Rainbow Arts/ACE competition.

Oil Imperium is a game which pitches you against four other ruthless oil men as you attempt to control the largest slice of the world's supply of black gold – putting the others out of business by fair means or foul. There's also a generous helping of arcade action as you drill, lay pipelines and indulge in some heavy counter-espionage.

THE COMPETITION

So, to win the boots, and get one step nearer to total domination of the oil world, simply answer the following questions.

1. How much money is each player allotted at the beginning of the game?

2. What character does Larry Hagman play in *Dallas*?

3. Which of the following is not an oil company?
BP, EMAP, Exxon.

And **DON'T FORGET TO INCLUDE YOUR SHOE SIZE!** Send your answers on a postcard to

RAINBOW ARTS SHINY LEATHER COMPETITION,. ACE, Priory Court, 30-32 Farringdon lane, LONDON EC1R 3AU. Entries to reach us by 10th October.

THE ACE PRIZE CROSSWORD 18

Set by Mps

The ACE Crossword is cryptic. The answer may be an anagram, or formed from the end of one word and the beginning of another, or simply hinted at in the clue. Most, but not quite all, of the answers are computer related.

ACROSS

5. Game played by Rod and I in Bono's house (8)
6. Basic instructions, perhaps (6)
7. Person asking Joker's enemy in game (6)
9. A few bits — sounds like a byte! (6)
10 Intends to change names (5)
11. Mixed up in a strange way (5)
14. CIA is cracking the code (5)
15. Nonsense about old boy being an android (6)
17. The Female Female caught in senile game (6)
18 Doctor gets a satellite receiver — it's fashionable (6)
19. One with branches in every street (4)
20. Rex notes characters for a game (8)

DOWN

1. Ocean traveller's game (7)
2 Indication that top game's in the wrong (4)
3. One is about to go ahead with game (7)
4. Solid state of stars (5)
6. Unusually nice baby for Dr Hewson produces (9)
8. Mental picture of a software house (7)
12 Traipse around for a computer game (7)
13. Addictive game for a marksman (7)
16. Rolls Royce layabout lounge lizard appears with (5)
18. Team playing friend (4)

Send your entries to Prize Crossword 18, ACE, 30-32 Farringdon Lane, London EC1

Closing date October 5 '89

ACE DIARY

1st September – St Crockie's day, Patron Saint of Rice Crispies

Phew, what a month you lot have ahead of you. Just get a load of the software being released this month: From Psygnosis there's Ballistix on the C64 and PC, Tracl II on ST and Amiga, Stryx on ST and Amiga, Never Mind on ST, Amiga and PC and Shadow Of The Beast on the Amiga. From Rainprose and Microbrid, there's F-19 Stealth Fighter on Spectrum, Tank on PC, Red Storm Rising on PC, Rainbow Warrior on all formats, Mr Heli on all formats, Quartz on ST and Amiga, Rainbow Islands all formats, P-47 all formats, Corner Command C64, Amstrad CPC and PC, Stanglider II PC, Weird Dreams PC, C64 and Amstrad and Stunt Car on the Spectrum, ST and 64. Cor, what a scorcher!

5th September – ACE October issue on sale

Packed with exciting features, reviews and more colour than a baboon's behind, and as usual, a whole month ahead of itself!

11th September – Release of Batman

Lucky Spectrum and C64 owner finally get their hands on their very own digital representation of Michael Keaton in Ocean's bigger, Batman the movie. Sorry, but everyone else will just have to wait.

16th September – H.D.T.V. Exhibition

Want to get a sneak preview of the vision technology of the future, then pop along to the London Ryan Hotel and have a glimpse at the new High Definition Television. Apparently, watching a recording of a goldfish bowl on HDTV is exactly like watching a real goldfish. Incredible!

23rd September – UK Electronica

The premier music electronics show this month. The place: Logan Hall. The time, 1.00 PM. Expect loads of guest appearances from artistes who have discovered the wonder of STs. For more details, call Mark Jenkins on (01) 885 5665.

25th September – A National Hero is born

A day of great rejoicing for all, especially those in the vicinity of Farmingdon Steve Cooke celebrates 30+ years of pleasant existence. Many happy returns boss, and so say all of us! Well, all except Pete Connor, because we didn't actually tell him. If you knew him, you'd understand why!

27th September – PC Show opening day!

The gates open! The crowds roar! The stars roll up in limousines! At last the PC Show has started. Sadly, most of you won't be able to get in just yet, as the first three days are trade only, and even if you are trade, you've still got to be over 18, so nyer!

27th September – Batman Amiga and PC swoops in!

In a dazzling presentation, the likes of which has never been seen before, Ocean release the Amiga version of Batman. Oh god, will Batmania never end?

30th September – PC Show goes public!

Quick, now's your chance! You can get in now, so don't delay. Pop along to Earls Court and see all the latest games and hardware, including your first chance to see the KONIX Multisystem! Plus you also get to meet the ACE crew, but who wants to meet Pete Connor?

1st October – Time to look forward to more software

Lots more releases this month, including among others Xenophobe on all formats, UMS II on ST, Amiga and PC, Stunt Car Racer on the Amiga, Blood Money on 64, Infestation ST/Amiga and Matrix Marauders on ST, Amiga and PC. Busy busy busy!

3rd October – 8th October – Olympia Decorative and Antique Fair

Here's something fun and educational for you to do if you've nothing else on. It's all happening at Earl's Court and looks like it's going to be quite a bash with all sorts of our prize guests, an army judo demonstration and lots of lovely grandfather clocks

5th October – ACE November issue smashes into the shops.

Early as usual, the new ACE is quite positively the best one we've done this month. Loads of reviews of all the top games and a feature on CDI, what more could you want?

6nd October – 13th October – Net a lot!

Well, what a pretty dull month October is. Not a lot happening at all. Ho hum. Well, at least Pete Connors isn't in.

14th October – Batman on the ST

Yes, it's the caped crusader again. To tell you the truth, I'm getting a bit fed up of him.

20th October – 29th October – The British Motor Fair

Drive along to Earls Court Exhibition Centre and stand for nine days and drool continuously over the plethora of new and wonderful cars, all closing the earth and guaranteed to get pranged within a fortnight of purchase

20th October – Cabal hits the turf.

Long awaited twin player arcade conversion Cabal arrives at last, but it remains to be seen whether it's been worth the wait.

The Konix will be launched this month at the PC show – but don't expect to sit on the famous Konix hydraulic chair until Christmas. Santa's gonna have a bit of trouble getting these down the chimneys.

BEAST FEAST!

Psygnosis have come up with a game that really squeezes every last ounce out of the Amiga. Grab a pen and you could get your paws on one of TEN free copies or TWENTY free Roger Dean T-shirts...

885-rated *Beast* (see pages 70/71) has to be seen to be believed. Even ACE reviewer Tony Dillon, who's seen some sexy software in his time, returned from his visit to Liverpool almost speechless. 'What they've done with the machine is extraordinary,' he said – and judging by our own glimpses of the game, we have to agree. The parallax scrolling is unlike any you've seen before, featuring far more levels and infinitely better use of colour. Sprites are exquisitely drawn and range in size from the big...to the enormous. The soundtrack is stunning (featuring more sound data than on the *Afterburner* and *R-Type* arcade machines put together) and the action is fast and furious. And to cap it all, you don't just get the game, you get a Roger Dean T-shirt at the same time.

So what's the deal then? Well, Psygnosis have given us ten copies hot off the duplicators' deck, together with twenty genuine Roger Dean T-shirts, designed exclusively for Psygnosis by the great penman himself. And all you have to do is this...

THE COMPETITION

Simply answer the following questions... easy, isn't it?!

1. Which company programmed the first ST game – released in the States and then in the UK?

2. In which city are Psygnosis based?

3. Which of the following is not a Psygnosis game?
Barbarian II, Barbarian, Captain Fizz and the Blastatrons?

Send your answers on a postcard to
BEAST FEAST, ACE, Priory Court, 30-32 Farringdon Lane, LONDON EC1R 3AU. Entries to reach us by 10th October.

COMPILATIONS COMPILED AND RATED.

As the winter settles in software houses start dusting down their old titles to extract a few bob more out of them by putting them into compilations. Here are the main ones to watch out for.

The Story So Far Volume 3.
Elite.

ATARI ST	£19.99	OUT NOW
AMIGA	£19.99	OUT NOW

Bombjack, Space Harrier, Thundercats, and Live and Let Die

ACE Rating. 615.

Premiere Collection 2.
Hewson.

Dark Force.
Ocean.

AMSTRAD	£12.99cs	£12.99dk	SEPTEMBER
SPECTRUM	£12.99cs		SEPTEMBER
C64/128	£12.99cs	£17.99dk	SEPTEMBER

Batman The Caped Crusader, R-Type, Last Ninja II, Dark Side

ACE Rating 939.

Light Force.
Ocean.

ATARI ST	£24.95dk	SEPTEMBER
AMIGA	£24.95dk	SEPTEMBER

IK+, R-Type, Batman - The Caped Crusader, Voyager

ACE Rating 840.

Winners.
U S Gold.

AMSTRAD	£12.99cs	£14.99dk	SEPTEMBER
SPECTRUM	£12.99cs	£14.99dk	SEPTEMBER
C64/128	£12.99cs	£14.99dk	SEPTEMBER
ATARI ST	£29.99		SEPTEMBER
AMIGA	£29.99		SEPTEMBER

Bantams, Thunderblade, LED Storm, Indiana Jones -
Temple of Doom *, Impossible Mission

* Not on 16bit versions.

ACE Rating 829.

Giants.
US Gold.

AMIGA	£29.99	SEPTEMBER

Outrun, 1943, Street Fighter, Gauntlet.

ACE Rating 840.

Triad II.
Psygnosis.

ATARI ST	£24.99	SEPTEMBER
AMIGA	£24.95	SEPTEMBER
IBM PC	£24.95	DECEMBER

Baal, Menace, Tetris

DIGITAL PASSION...

This gripping serial, begun in issue 23, has had to be held over for legal reasons. We are consulting with our solicitors with regard to the alleged offence caused to Miss Norberta Finch-Bestard by allegations concerning her relationship with certain kitchen utensils. The facts, and nothing but the facts, will appear in next month's issue.

ACE PRIZE PUZZLE 18

Set by Archie Medes

ADDING ACE

In an alphametic puzzle, letters are printed in place of the original digits and the problem requires you to re-substitute the numbers and find out what the sum is.

For example, what three-digit number is represented by ACE in this simple addition?

```
  ACE          251
  ACE          251
  ACE          251
  ACE          251
  ACE          251
EACC         1255
```

The solution is shown on the right — that is, that A=2, C=5, and E=1. This month's problem is in two parts.

1)
```
  ACE              ACE
  ACE              ACE
   ┊    18 ACE'S    ┊   ? ACE'S
  ACE              ACE
  ACE              ACE
EACC             EACC
```

The first problem is to increase the number of ACE's to be added to 18. This still results in a solution represented by the letters EACC. Having done this, increase the number of ACE's still further and try to find yet another solution which results in EACC.

As with all puzzles of this type the same letter stands for the same digit wherever it occurs — different letters represent different digits. Of course, each of the two different problems require a different substitution.

Don't forget — next month features a whole new puzzle section. Check out next month for a backlog of puzzle

THE ACE SERIAL

The Death of N'Garr..?

N'Garr Thrombobo was the world's first totally artificial electronic intelligence. He also looked like being its last. From his humble beginnings as a Centaurian Battledrone in defence of the Mutant Millers from Mers, he had struggled against his human creators – who then became his tormentors.

His was the most powerful intelligence in the known universe, and yet against the colossal, unyielding and insensate stupidity of the human race he was apparently impotent. He had been stamped on, incinerated, bombarded in a particle accelerator till his neutrons boiled, and even flung himself back from the non-existent limbo of non-space as a small piece of anthracite to confront his mortal enemies – those ghastly, slithering, flaccid heaps of protoplasm called The Human Race.

The Grimleythorpedsale Insurrection Party was composed of members of The Human Race, albeit ones even more ghastly, slithering and flaccid than usual. It formed a major local political force. To such a degree that it controlled the local council by a sizable majority, and thus had ample funds for the purchase of guns, ammunition, explosives, casual yet attractive combat wear, soft leather jackboots and matching accessories. But given that such items were generally in rather short supply in Grimleythorpedsale, GIT was left with large amounts of money left unspent at the end of each financial year. Money which had to be spent to ensure the same allowance next year. Hence the last-minute purchases of such items as Mussey Furgatroyd air-conditioned, cruise-controlled dustbin lorries, Acme Superdeluxe Roadsweeper Turbos and – crucially for that small part of N'Garr Thrombobo still existing within the molecular structure of a mis-shapen little lump of anthracite – a McDonnell Douglas D-16 drive-by-wire mechanical earthmover.

At the very instant that the piece of anthracite was about to be crushed to smithereens, Thrombobo ported himself through the metal links of the tracks, down the leading axle, up through the transmission housing and into the D-16's central processor.

What power! Thrombobo sent the digger careening around the site of the explosion focused by the gravitational wormhole and a subsequent neo-temporal paradox, and the driver flung from the cab. Revving up the two turbo-diesels, Thrombobo then spun the digger round and aimed it at the nearest visible site of human infestation – the main hospital buildings. Notching the vehicle into first, he revved the engine to its maximum, then dumped the clutch.

The machine's tracks dug deep into the soft ground and then the digger was lurching forwards, shovel still held aloft. As the vehicle accelerated, the shovel waved drunkenly up and down, spilling earth and bits of rubble over its sides as it did so. It did not spill, however, a small fragment of floppy disk just sticking out of the rubble.

"Splurrrgghh...?" went the matron as she looked through the window over the shoulder of Mr Sargh, the replacement Head Surgeon. Her out of face fell to the floor.

"I say, Matron, do you mind?" he objected, taking off his bifocals and cleaning off the droplets of tea with a portion of rubber-trousered surgical gown. He frowned slightly at the sound of breaking glass and collapsing masonry, and turned to see the digger cleaving its way towards him over the rubble that was all that remained of the wall.

"Mr Blindgeon, please don't make such a noise. And what do you want and do you want me to take your temperature again for?" he said, inspecting the digger's bucket over the top of his bifocals and taking a thermometer out of his top pocket. "You know you really ought to clean more thoroughly-sourplurgleyssplurdgy-ip-..." he went as he slid underneath the earthmover's tracks.

"Help! Help!" shrieked the matron, grabbing the patients as they pushed to get out of the ward and throwing them over her shoulder, "Help...!"

The sound attracted N'Garr Thrombobo, and he turned the digger towards it. The bucket caught the matron in the posterior just as she got out into the corridor, and she and the bucket stopped to the floor with a thump that caused the hospital's foundations to settle three millimetres. The digger's tracks span, trying to gain a purchase on the wet-polished floor, and the matron huffed and puffed, trying to lift herself out of the bucket.

Then the matron was up. The digger abruptly tipped backwards and the bucket went crashing through the ceiling.

"It's a disgrace!" shrieked the matron, approaching the cab. she climbed in, moved the engine and managed to dislodge the bucket from the ceiling. It came down amidst a shower of plaster, wooden beams and six hundredweight of boiled cabbage being stocked by the hospital kitchen for next month.

N'Garr Thrombobo tried to wrestle the controls away from the woman, but to no avail.

"This must belong to the demolition squad," muttered the matron to herself as she drove the digger through the hole in the wall, "I must have a strong word with them in the morning-." Her voice faded into the distance as N'Garr Thrombobo forced the Mc Donnell Douglas's ejector seat circuits he turned the digger back, make another hole in the wall and set about systematically annihilating the hospital and its contents

Unfortunately, his control over the hydraulic circuits was proving strangely lacking. he drove the digger over the pile of boiled cabbage in the corridor and tried mowing the bucket up and down. It did't work. He realised then that, somehow, his horribly nice and altogether despised alter-ego – created when his floppy disk was sliced in half – must have found its way via the hydraulic rams, through the constant-velocity trunnion spigot bearings and into one of the CPU's ROM packs. Damn!

Thrombobo sent the digger crashing into the main surgical ward. The bucket was now totally under the control of his other half, and was lifting patients out of harm's way before he could crush them beneath the digger's tracks. Maddened, he smashed through the wall into the genetics ward, where the McDonnell douglas's robotic manipulating arms frantically prepared endless cups of tea for terrified old ladies, boiled their pillows and generally made them feel as comfortable as possible considering an eight-ton earthmover was running amok feet from their bedposts.

N'Garr Thrombobo was incensed. Blowing two great billows of smoke from its exhaust stacks, the digger lined up for the doors at the end of the ward and lurched forwards. Glass and wood flew everywhere as the bucket let them first. Then it hit the wall on the other side of the corridor with a bonejarring impact that loosened Thrombobo's data in its tracks. Great blocks of masonry fell from the wall and the digger's bucket arm buckled as the tracks clawed at the floor

Then it surged forward, breaking through into the world outside. Unfortunately, since the hospital was built on a slope, it did so from the first floor. N'Garr Thrombobo could only watch helplessly from the earthmover's ROMs as the vehicles plunged towards the ground below – to its doom.

Was this, at last, The End...?

ACE READERS PAGES
THE SPACE WHICH YOU FILL

Buying or selling your computer? Then look no further than the readers pages, all the hardware you need at reasonable prices.
Unfortunately due to lack of space the helpline has been put on a temporary hold, but we will be returning next month. So keep those enquiries coming!

HELPLINE

Are you cool at coding? Are you good with graphics? Are you full of musical wizardry, any of these? If the answer is yes to any of the above, write to Simon Cowell, 431 Munti, Flughafen, D 4055, NIEDERKRUCHTEN, W. Germany.

Anyone needing help on E.H.I.S please phone Edward on, B10469. E.H.I.S. stands for Emlyn Hughes International

Soccer. I am excellent at the game. Anyone wishing to come over and play doubles, any sex please call. I am also selling an Acorn Electron for £70.

IBM owner has solutions to Defender of the Crown, King of Chicago, Space Quest I & II, Larry, and more. To swap hints, tips, etc. write to: David Butler, P.O. Box 35771, Menlo Park, Pretoria 0102, Republic of South

Africa. All letters answered!

Has anyone got a solution for Captain Blood? I also need help with Gauld of Thieves. I have all the treasures deposited at the bank but need to know exactly what to do to complete the game. All assistance gratefully received. Write to: Steven Laber, 5B, Martin Hardie Way, Tonbridge, Kent TN10 4AE.

HELP! I have been playing Corruption now for a month and got nowhere. I need help! Please send tips to: Adam, 1 Birch Moor Road, Stanley, Wakefield. LF3 4EE.

Attention Amstrad Owners! Loadsa pokes on type Contact Richard Marsh, 16 Bincombe Drive, Crewkerne, Somerset. TA18 7DE.

on C64, C16, ST, Amiga, BBC and Electron. Over 100 cheats on C64 booklet 'Cheat on, Barbarian, Cybernoid, Jailbreak, Green Beret, Nemesis, Mike, Iron Horse, Great Giana Sisters, Out Run, Platoon, Road Blasters, Wizball and many more. Send SAE for details only to: HAK-IT OUT, 40 Beresford Road, Parkstone, Poole, Dorset. BH12 2HE.

HAK-IT-OUT GAMERS CLUB. Cheat at games

Dungeon Master any problem solved, tips hints, maps, anything. All FREE. Write now, Richard Haslam, 151 Cartmel Road, Woodseats, Sheffield 8, S80NL, or phone: 0742 584002 between 5-9pm weekdays.

SEXE - Now I got your attention! Please HELP! - Stuck on Zak McKracken, Carrier Command, Falcon - fail Amiga A500) and Mercenary. I've completed Millennium

PEN PALS

be fast (no lamers), write to: Deep Thought, 8 Iron Avenue, York, YO3 7TX, ENGLAND. Hello Stryler and Matt.

Amiga contacts wanted! Write to Mark, B Sunnymede Avenue, Askern, Doncaster, South Yorkshire, DN6 0LY. Golden Regards to: Stephen, Neil, Stu, Stilo, Graham, Joe, and finally to AGN.

Amiga contacts wanted, 100% answers to all letters. Write to: Alan, 26 Orescott Close, Banbury, Okon. OX16 0nd, or phone 0295 62494

Amiga contacts wanted, 100% reply guaranteed 1.2 days Fast and reliable contacts only. Send disks and lists to: Enigma, 7 Sheraton Park, ingol, Preston PR2 7AZ. Also, worldwide contacts wanted.

C64, Atari ST IBM user seeks contacts all over the world. 100% reply, please state machine. Write to: George Kumanko, 24 Lily Avenue, North Cliff, 2195, Johannesburg. Republic South Africa.

Amiga contacts wanted worldwide to swap the latest, hottest stuff aroung, etc. Send lists or disks to: "Slone", 96 Pembroke Road, Seven Kings, Ilford, Essex.

Atari ST contacts wanted, fast and reliable. Please write to: Basil, 226 Dennton Road, Dooreg, London SW17 8HX, or phone me on: 01 682 2007. No beginners please!

Amiga contacts wanted, to exchange hints, tips, etc. 100% reply, Ray, 413 Gleneagles Avenue, Rushey Mead Est, Leicester LE4 7PJ. England

ST contacts wanted. Write to: Chris, 133 Surrenden Road, Brighton, Sussex, England (0273) 551972. 100% reply

Amiga contacts wanted in UK and Europe to form new group C.I.A. Must

*SUPERHERO comics or graphic novels to swap? Write to: Philip Tapping, 148 Usterville Pll, Portadown, Co. Armagh, N. Ireland. BT03 9HD

mouse + over £200 of software. £500, will superinfe. Phone: 07375 544266

ACORN ELECTRON, plus 1, disk drive, £700+ orginal software, joystick, manuals, magazines and B/W TV All leads included Sell £200. Phone Ben: (0458) 65877.

Good Home wanted for C64C, OC118, Buret, Nibbler, Moss Mouse, Printer, Action Replay 4, 2 tape decks and much more for £320. 427-7853.

Commodore 64C, boxed, datasette, joystick, over £200 software, excellent condition, sery year warranty, £150 ono. Call Sean on: 0234 713893.

ST originals, Gunship, Dos, Falcon, 3D Pool, Dungeon M, Starglider 2, Night Raider, Corner Command. Grid ron, etc., etc. £7 each. Phone, Brentwood 216112.

C64C, Disk Drive, C2N, Freeze Machine, joysticks, £300 worth of software. Absolute bargain at £200 ono. Phone 061 773 5815.

ATARI 520 STFM, excellent condition, Jas ACE mags and others, some software £175 ono. Phone 0708 866014.

Spectrum 128K boxed, over 500 games, hundreds books/magazines, Quickshot 2, joystick, Cheetah. Interface data recorder. £145. Phone 0524 762157.

Datel's Pro Sampler Studio. Top quality sound reproduction. Boxed, as new. Cartridge, software disk and free samples disk. £55 ono. Phone Chris: 0646 683225.

Alan 52QSTFM internal, 1 meg. Five months old, under guarantee, still boxed as new with

£500, will superinfe. SAE to: Adrian Gray, 35 Chesterfield Drive, Riverhead, Seven Oaks, Kent. TN13 2EQ.

Amstrad CPC 484 green screen monitor, games worth £150, joystick, modulator and £130 keyboard. Only £355. Phone Blackie (0268) 285529.

Amiga games including, Lords of Rising Sun, Bio Challenge, War in Middle Earth, + many more. Phone: Andrew on. (01) 650 1759.

Amiga sound sampler + software and Amiga midi interface, £20 each or £35 for both. Write to: S Elmer, 19 Brooksfield, Bicleston, Ipswich, Suffolk. IP7 7EJ.

SEGA SYSTEM with 3D glasses + 20 games including: Double Dragon, Thunderblade, Out Run, Miracle Warriors, Shinobi, After Burner, Space Harrier, 30, etc. Excellent condition. Worth £600, will sell for £300 ono. Phone: Manchester (061) 736 4150.

Sega games £10 each over 15 titles full details. Alan Chapman, 65 Lime Grove, Doddinghurst, Essex. CM15 0QX. 0277 822 793.

Spectrum 128K +2 with £70+ mags, £50+ games, hardware, £50 books and £600+ software. Bargain at only £150. Phone 07021 285273.

C64 2 CN2's, disk drive, 1 joystick, export trilogy, 130 games, disk + tape storage box. Worth £1000, sell for £300. Phone: Paul 061 449 0301 after 6pm. Please HURRY!

Amiga 1084S colour monitor, £150 or swap for Digi-new Will also swap for external disk drive or software.

Phone: Lee 0524 417184.

LOOK! Amstrad CPC 464 with modulator and £270 top games, mags, manuals, joystick also included Excellent condition, hardly even used. Worth £560, sell for only £140. Phone Shank 767-8806.

Sega Master System, plus light gun, 5 great games like Wecky and World Soccer. Excellent condition. All boxed, sell for £130. Phone Rexham 22177 after 4pm.

Amstrad CPC 612B with colour monitor sell under guarantee, mouse, joystick, c/recorder, GAC mags and software worth over £700 asking £420. Jull, 6 Kingsnorth Gardens, Folkestone, Kent or ring 0303 43845.

CBM 64, for sale with disk drive, cassette deck, 150 disks full of software, and loads of originals. Good condition and boxed as new. £350. Phone: 0262 850570.

Unique portable Renegade Arcade Machine, plus colour monitor £300. Also Commodore 64, joystick, Datacette and over £100 software. £120 or swap both for Amiga. Phone: 061 748 3148.

BBC(B) excellent for a beginner. Has video digitiser, tape recorder and disk drive, + £500 worth of games. £320 ono. Phone 031 335 2107, and ask for John or Martin.

Sega System Two Joysticks, 29 games gong for £350. Phone: Andres, 01 647 1045 for details.

Spectrum 128K excellent condition, 9 months old, joystick, cassette lead, 25 games including Afterburner and Out

FOR SALE

AMIGA 500 for sale Includes modulator, mouse, joystick, games, etc. Virtually unused from new. Contact David on (Exeter) 0395 876283. Bargain at £280.

Orginal Spectrum software for sale. Latest games at budget prices: Operation Wolf £2 99! Send SAE to Anthony, Old House, Panton Green, Basingstoke, Hants, RG26 6AE. or phone (0734) 814681. Hurry up though!

C64C, Datel Drive, C2N, Freeze Machine, joysticks, £300 worth of software. Absolute bargain at £200 ono. Phone 061 773 5815.

ATARI 520 STFM, excellent condition, Pins conditon, Pro5000 joystick, disk box and many games. £320. Ring: 542 3480.

ATARI ST games, Dungeon Master, Elite, ISS, Ikul Ghostbusters + more. Prices from £4 Contact Gordon (0624) 74899, after 5.30pm.

SPECTRUM +2, £200 of software, 1 year old, joystick, manual, leads etc. For quick sale phone (073522) 3004, £60.

Sega System + Xenos joystick & Excellent games including R-Type, D.Dragon, Thunderblade, Unwanted Christmas Present. Perfect condition. All games boxed. Worth £350 will accept £185. Phone: (0274) 568048 after 6pm.

Amstrad CPC 464 colon monitor 200 games, 2 joysticks, 2 year service contract included, £180. Phone: 01 508 9138.

BBC games for sale Elite, etc. £120. Worth

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you want them printed.

LISTS

The famous ACE lists, according to Richard Parker of Mansfield Road, Sheffield and Eugene Lacey, the man who invented games reviewing in the UK. Got any lists? Course you have - so send 'em in.

Lists, it is worth mentioning, don't have to be funny. They are an in-depth, psycho-social determinator of modern living (© Pretentiorama International Corp 1989).

RICHARD PARKER'S TOP FIVE FAVOURITE LAMP SHADES

1 Broderie Anglaise Table Lamp.
2 Capiz Shade Table Lamp.
3 Czechoslovakian Three Tier Crystal Waterfall Pendant.
4 'Touch Lite' Large Hexagonal Ginger Jar Table Lamp.
5 Cookie Jam Table Lamp (Grey)

RICHARD PARKER'S TOP FIVE UNUSUAL JOYSTICKS

1 The Terminator
2 Redofin Telesports II Controller
3 Sega Controller
4 Game Mate II Remote Control Joystick
5 Quickshot IX Joyball

RICHARD PARKER'S TOP PAINT COLOURS

1 Cucumber
2 Buttermilk
3 Dove Grey
4 Honeydew
5 Magnolia
6 Lobelia
7 Poppy (naché)
8 Sage
9 Sungold
10 Hereball

RICHARD PARKER'S TOP FIVE FLUFFIEST POCKETS

1 Avanti Denim Jeans Pockets.
2 Yankee Bass Blue Jeans Pockets
3 Barry Deley Bio/Green Striped Short Breast Pocket.
4 Adidas Back (Purple/Green Slash)
Tracksuit Tp Left Hand Pocket.
5 1847 Pioneers Black Jeans Back Right Hand Pocket.

The BLITTER END

NO GOLD AT THE THE END OF THE RAINBOW?

The Microprose marketing man officiating at the launch of the Greenpeace game *Rainbow Warrior* was understandably confused. Struggling with the joystick and a pre-release version he consistently failed to rescue the hapless seal who, floundering beneath an ice flow, was clearly getting low on oxygen. 'Oh well,' he said, 'if you get fed up, you can always start clubbing them instead!' Although this remark sparked off an unholy glint in some of the gamesters present, who reckoned that anything on the screen which moved should be shot for, if it didn't move, shot until it did, it did cause a few of the assembled Greenpeace brethren to choke on their ice-cubes.

But what did they expect? You can understand the poor PR man's problems. If the *Rainbow Warrior* appeared in any of Microprose's other games, it would be firmly in the centre of your sights as you toggled the AGM-65D Mavericks before popping over to Libya to mop up any remaining life-forms.

When asked why they'd chosen Microprose, instead of Greenpeace replied that it was precisely because of their militaristic software. He saw the Greenpeace game as a chance to convert the most confirmed technocrats to the joys of green living and peace on earth. You might as well prance into the den of a hungry lion and toss it a Jordan's Crunchy Bar.

The truth is that Greenpeace didn't really choose Microprose at all. Microprose chose them, since most of the other major players in the industry had already rejected the product. And if you're wondering why anyone should be so stupid as to turn down a cast-iron profit opportunity, don't – despite a ton of good intention, there's only an ounce of gameplay in the entire program that would satisfy anyone over eight years old.

Despite everything, the launch of the game ended on a good note. As the video demonstration came to an end, another punter remarked (in an embarrassingly loud voice) that one part of the game looked just like Frogger. At least someone can appreciate a green game ..

※

Having trouble with Super Mario Land on the Nintendo Gameboy? Of course you are. Our hot tip (courtesy of ace manager Gary Wilkins) is to head the bricks on the Gameboy level when you see pipes that you can't jump up to. Hey presto...invisible lifts!

※

Wedding bells are in the air and Bitter has been digging the confetti out of his hair since last week when top softycoon Mark Cale (he of the two Ferraris) was wed. Bitter's spies report that he had two strippers at his stag do (obviously likes things in twos, does Mr Cale) and has now whisked his new brunette and strife off on a four week of the fab nest.

Lucky girl. Not only will she be sporting an exotic sun tan on her return but she'll be part of the only couple in Pinner with His 'N Hers Ferraris.

※

More lovey dovey stuff has been going on a bit closer to home where a certain Editor of a 'sis-

ter' publication of ours is off on a short trip with his girlfriend. No surprises there, until we got wind of their destination. The Teddy Bears Fair. Apparently the lady in question has a house full of the furry beasts - most of them bought by the same Editor. Bitter wonders where Julian Rignall gets the money to put into slot machines with all those teddy bears to feed

※

But there is no time for romance in the big bad world of software. The shops are not happy. Apparently you lot have been soaking up the sun, playing tennis, watching the Aussies slaughter England in the Test Series ...and not buying any games. One tag distributor is so naffed off with the summer slump that he's considering closing down next summer for two months like the French. Bitter wholeheartedly supports this proposal. It would be great. Gary Williams could play with his Game Boy, Steve Cooke could repair to his Cornish hovel to meditate, and the Bitter...?

Stand by next month for an in-depth report about piracy in Trinidad and Tobago.

※

Interesting facts department: importation of computers by individuals to the Soviet Union has shot up in the last two years, thanks to the relaxation of travel in and out of the country. The reaction from Soviet customs and excise, however, hasn't been long in coming. From the 15th August, new duties have been applied to the importation (all greatcoats to be removed while passing through customs) of various Spectrums, C64's etc. You will now have to pay 5000 roubles per machine (about £1000). You have been warned, comrade...

※

Meanwhile back in the decadent West, jet set ter Jerry Hall has joined ACE as Dep Ad Manag er...Jerry Hall from Biggleswade, that is. He s a perky fellow, but his legs just aren't in the same league.

Blit-blit!